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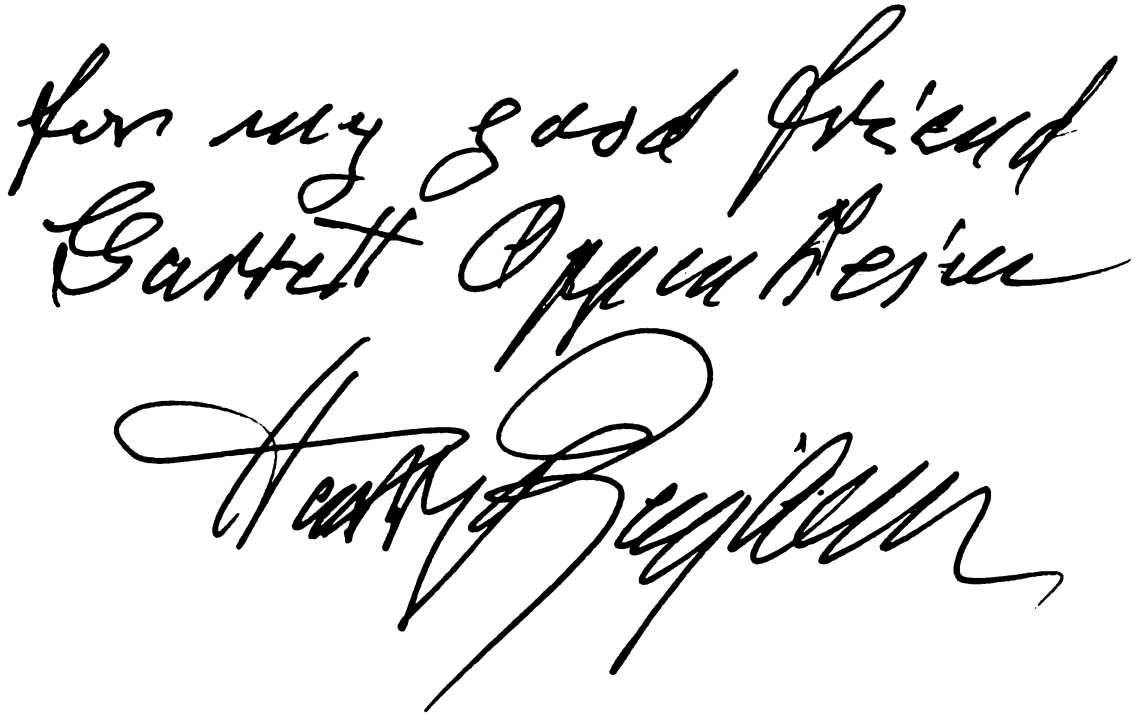
TRANSSEXUALISM AND SEX REASSIGNMENT

TRANSSEXUALISM AND SEX REASSIGNMENT

Richard Green, M.D.,
and John Money, Ph.D., Editors



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DEDICATION

The editors dedicate this book to Harry Benjamin, M.D., the pioneer of transsexual research. His compassion and courage in treatment of the transsexual patient opened a new frontier in the knowledge of human nature.

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FOREWORD

The human individual has a basic need to contribute something to the society of which he is a part. Few pleasures can be greater than that of being able to alleviate suffering by helping people to fit comfortably into a society that previously had rejected them. When the work toward these ends is done in association with men and women of high caliber, the satisfaction is even more profound. Speaking for myself and for the Erickson Educational Foundation, I wish to remark that all of these rewards have been ours in working with transsexual patients and in assisting in the preparation of this book.

The historical records make it very clear that transsexualism has been a human problem since the most ancient times of which we have any knowledge. Yet until just a few years ago the research with transsexuals had been limited to the case studies of a few doctors who understood little more than that the person before them was different from the vast majority of other patients who were presenting more common complaints in the area of sex behavior and orientation. Even specialists in sex and gender problems rarely encountered individuals who appeared to be male but insisted that they felt female, or females who felt themselves to be male. Such cases were usually classified as "homosexual," or "homosexual transvestite," although the doctor could hardly be comfortable with such diagnoses. Those few specialists who saw enough transsexuals had to admit that this group differed in fundamental ways from both homosexuals and transvestites, although it perhaps did relate to them in some way. But while the homosexual and transvestite problems could sometimes be resolved by psychotherapy, transsexualism was wholly intractable to any known psychotherapeutic procedure. Nonetheless, "society" strongly disapproved of feminine males and manly females, and typically physicians felt they must attempt to force the transsexual to conform to "normal" patterns. As this could never be achieved, the patient was rejected by his doctor almost as frequently as by other persons.

The transsexual knew all too well the truth of Vernon Howard's (1964) statement that "all varieties of mental pain—anxiety, despair, depression—spring from the difference between your real self and the

self you think you should be." Struggling to suppress what he felt to be his real self, and to become the "self" demanded by society, the transsexual's life was one of intense suffering as he fought against feelings that were not only honest but also basic in the structure of his personality. This was a fight the transsexual could not win and he fought it at the price of anxiety, depression, and despair not infrequently culminating in self-mutilation and suicide. The mind could not accept the body and, therefore, the transsexual was willing to submit to new, radical surgical procedures that could reshape the body, bringing it into conformity with the psychology of the person. By this means, the transsexual hoped to gain society's acceptance and the opportunity to live out a reasonably normal and constructive life.

The transsexual has wanted as much as anyone to heed the good advice of the "positive" thinkers: "You need never be anyone but exactly who you are. This is a truth that sets you free." Surgical and other medical procedures, altering the body of the transsexual, bringing it into closer conformity with his psyche, have set many of these people free—free to work, free to love and be loved. But this medical solution to the problem of these patients became possible in the United States only after years of effort by dedicated scientists who had to break through powerful barriers of superstition and prejudice.

Historically, mankind has been ignorant of the complexities of sex and gender role causation. The most usual response to extreme sex role confusion has been to cast out the misfit or, in some cases, to regard him with superstitious awe. In either case, the individual was given no chance to live an ordinary, happy, and productive life among his fellow men. But now, as this present volume demonstrates, a courageous and skillful group has ventured into the unknown area. Making their way through a confusing maze of mores, laying bare conflicting factless theories, they have disregarded the centuries of prejudice to blaze a trail for understanding and facts.

It was Dr. Harry Benjamin who applied the term "transsexual" to the type of gender-disoriented person described in this collection of research papers. He and a few others were the first to realize that transsexualism is a separate phenomenon, raising unique medical, social, and legal questions. These pioneers then had to find solutions that also were unique. They first had to come, reluctantly, to the conclusion that psychotherapy was ineffective in such cases. Administering hormones was helpful, but left important problems remaining to be dealt with. They recognized, finally, that this was a task for the highly skilled plastic surgeon, the urologist, and the gynecologist. A team was needed: highly trained, open-minded, courageous. Although here and there throughout the world an occasional doctor or clinic performed sex-change operations—sometimes successfully, sometimes not—it was only after The Johns Hopkins Hospital provided its facilities and

publicized its work that sex-conversion operations began to be undertaken openly by hospitals of high reputation.

In America, little had been accomplished until 1964 in the way of systematic data gathering other than clinical observations so well exemplified by Benjamin himself. Then the Harry Benjamin Foundation, comprised of a group of outstanding scientists from several fields energetically headed by Dr. Benjamin, was launched and financed by the Erickson Educational Foundation. A research program was conceived and carried out. Batteries of tests were given to transsexuals. Depth studies of their sexual attitudes were made. Various types of gender-adjusting treatment were worked out and further testing was undertaken following treatment. Progress was obvious. Paths were being traced through the mazes. The pioneers began to leave a trail of facts, so that others might follow. These are the facts that are presented, among others, in this volume—facts that should enable growing numbers of professionals to help the transsexual find his way to a satisfying life. Not only transsexuals, but millions of others whose problems are to some extent gender-related, may also be helped indirectly.

Other books will follow as we learn more, as old techniques are refined and new techniques developed. Hopefully, the present work will stimulate more research, more help, more happiness.

It has been my reward to watch this work's progress and to be associated with many of the men and women whose research and skills are here evidenced. Concerning these contributing scientists, I want to point out that it was not only their considerable talents and energies that they gave to the project. They also worked, in many cases, for fees that were substantially smaller than those they ordinarily command. The Erickson Educational Foundation is not one of the huge philanthropical institutions blessed with almost limitless funds. A good part of this work would not have been possible had not the scientists given of themselves, rather than just "worked on a project."

I am happy to say that where there was so much ignorance, there is now some real, detailed knowledge. Where there was so much prejudice, now there is less of it, and we have some solid data to counter the prejudice that remains. Because of these achievements, a long-suffering human group now has a better chance to function satisfactorily.

It has taken courage for the pioneers in transsexualism research and treatment to work in such a controversial area. Most people, including many of the patients, will never know quite how much courage, nor about the many pressures that had to be resisted. But on behalf of all the patients, past and future—only some of whom I will ever get to know—I extend thanks to all who have made this book and our other gains possible.

REED ERICKSON

PREFACE

Although the phenomenon of cross-gender identification, now known as transsexualism, has been on record since antiquity, its treatment remains a medical frontier and the relatively new development of sex-reassignment surgery is one of the more controversial subjects of modern medicine.

In the main, transsexuals have been a patient minority outside the estate of the physician's understanding and therapeutic investment. For most people, empathy for those who feel that they belong among the opposite sex is difficult or impossible, and the idea of having one's genitalia altered so as to appear as those of the other sex is inconceivable and repugnant.

Gender identity, an individual's sense of maleness or femaleness, masculinity or femininity, is a fundamental psychologic phenomenon about which much remains to be learned. Transsexualism, in which gender indentity and anatomy are incongruous, is of considerable research importance because, as an extreme example of anomalous gender identification, it may lead to a further understanding of normal gender-identity development. However, the considerable emotionalism which has surrounded transsexualism and sex reassignment has hampered serious investigation.

Transsexualism and Sex Reassignment had its origins in the advisory board meetings of the Harry Benjamin Foundation. In the earliest stages, it was discussed as a volume that would embody the findings of the research group working directly under the auspices of the Foundation. It soon became evident that such a limitation would make the book unnecessarily parochial: It would, for example, have excluded those patients who were treated and operated at the newly constituted Johns Hopkins Gender Identity Clinic and who were not also patients in the Harry Benjamin Foundation research study, as well as the important body of work being done elsewhere, especially in Europe. So the book grew to its present proportions.

Subject material in *Transsexualism and Sex Reassignment* has not been selected to provide a forum for the many critics of sex reassign-

ment to debate the controversial nature of these procedures. Considering both the volume of anecdotal and popular material on transsexualism available and the ample opportunity for critics of sex reassignment to express their views, it was decided that the more compelling need was for a scientific forum representing data and views of those few scientists currently investigating transsexualism and sex reassignment. Thus an attempt has been made to collate from these investigators, working in several disciplines, preliminary research data currently available.

It is hoped that this compilation will help to dispel some prejudices, promote further serious investigation, and remove another area from the realm of superstition by subjecting it to scientific scrutiny.

RICHARD GREEN, M.D.
JOHN MONEY, PH.D.

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"Psychological Testing of Transsexuals: A Brief Report of Results from the Wechsler Adult Intelligence Scale, the Thematic Apperception Test, and the House-Tree-Person Test" by Ruth Rae Doorbar, Ph.D., was first published in *Transactions of the New York Academy of Sciences*, Ser. II, Vol. 29, No. 4, 1967, copyright 1967, The New York Academy of Sciences.

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TRANSSEXUALISM AND SEX REASSIGNMENT

INTRODUCTION

Harry Benjamin, M.D.

First, my grateful acknowledgment to the editors for insisting upon my contribution to this signally impressive volume, at least by relating how I myself became interested in the clinical picture known now as transsexualism. At the same time, they have given me an opportunity to describe my own efforts toward gaining recognition of the transsexual state as a concrete psychopathological entity.

The history of transsexualism is a short one indeed, hardly worth being called "history."

The phenomenon of gender-role disorientation, that is, of anatomic males feeling themselves to be women and wanting to be women and of anatomic females feeling themselves to be men and wanting to "change sex," has existed in rare individuals since time immemorial and was, in more modern days, occasionally described by psychologists as "total sex-inversion," or with similar designations. Its clinical picture, however, was never seen as a definite, recognizable medical entity, rare in the general population, fascinating for the science of sexology, and impressive in its often tragic consequences for the individual.

The first book relating in popular-scientific form a probable case of transsexualism may be Niels Hoyer's *Man into Woman* (1933). The noted British sexologist, Norman Haire, wrote the introduction which made Hoyer's book a semi-medical contribution. It is the story of a Danish painter who became "Lili Elbe" after several somewhat obscure operations in the 1920s, operations that altered his genital organs. He had been married as a man, but before he could enter into a second marriage as a woman, he died of a cardiac condition. It is possible that a hermaphroditic abnormality complicated the transsexualism in this case.

My own first contact with the phenomenon, although I was far from recognizing it as such, occurred in the early 1920s. The largest part

of my medical practice at that time was concerned with the growing fields of endocrinology and geriatrics, but sexological cases were by no means rare. Among the latter was that of an elderly transvestite who owned a press-clipping bureau. He was a well-educated man, married, and a father. Being separated from his wife, he had his home together with his business establishment. He lived there completely as a woman. His family and employees fully accepted his "eccentricity." Outside the house, he dressed as a man.

He had read about the newly discovered female hormone, Progynon®. This product, then of rather low potency, was the result of long and intensive experimentations by Eugen Steinach, Professor of Physiology at the University of Vienna, and by Professor Schoeller of the Schering Corporation, Berlin, Germany. This company was and still is the manufacturer of this widely used estrogenic hormone.

My patient wanted to know whether Progynon® could enlarge his breasts, which would give him a great emotional satisfaction. With some hesitation I agreed to investigate, and after a few months of parenteral therapy, a mild gynecomastia was produced to the infinite delight of the patient and with emotional improvement.

This desire for physical changes, I realized later, characterized this transvestite as having a transsexual trend. The true transvestite would not be interested in it, at least not seriously enough to do something about it. He is contented with cross-dressing alone. Only in masturbatory fantasies, he may endow his body with many female characteristics.

Years later, during my more than ten years' term as Consulting Endocrinologist to the College of the City of New York, my next contact with gender-role disorientation took place. I recall two young students whom I would now probably suspect as being transsexual. Both were sufficiently feminine in appearance and mannerisms to be called "sissies" by their classmates. One wondered whether I could "masculinize" him. His father complained to me: "My boy has never been a real boy." The other was afraid he was on his way to becoming a homosexual. I was unable to follow either one's career but, in retrospect, I am reasonably certain that at least the second boy was more likely to develop into a transsexual than a homosexual, because in him there was a disturbance of gender consciousness, which is not the case in homosexuality.

Again, years later, I met my first more immediately recognizable male transsexual through Dr. Alfred C. Kinsey and his associates, Dr. Wardell B. Pomeroy and Dr. Clyde E. Martin. These scientists were then engaged in taking routine sex histories for their work on sexual behavior in the human male and female. They found a few rare instances when a more or less intense desire to "change sex" was admitted to the interrogators.

One of these patients was referred to me for an opinion or possible

treatment. That was in San Francisco in the summer of 1949. My first thought was psychotherapy, but that had already been attempted with negative results. This patient had also been examined by two groups of psychiatrists at the University of Wisconsin. One group recommended a sex-reassignment operation (which the patient wanted) in order to prevent an emotional breakdown. The other group advised against surgery as being unlikely to solve the underlying psychological problems. I suggested estrogen therapy as a temporary expedient. Eventually, the operation was performed in Europe in 1953. The immediate result seemed to be good emotionally, but unfortunately, I have not been able to follow the case after 1958.

The next and perhaps the most important milestone in the history of transsexualism was the "sex conversion" of Christine Jorgensen and the world-wide publicity it created. Christine's case is too well known to repeat its details here, and besides, the fall of 1967 saw the long-awaited publication of her autobiography (Jorgensen, 1967), supplementing the report of her case by her Danish physicians, Hamburger, Stürup and Dahl-Iverson (1953). I met Christine less than a year after her surgery. She had been overwhelmed with letters, many of them pathetic pleas for help. They were similar to the hundreds of letters that her chief medical advisor in Denmark, Dr. Christian Hamburger, had received and an analysis of which he published later (Hamburger, 1953).

Hamburger combined with his analysis an urgent plea to the medical and legal professions to do something to help the plight of these unfortunate people for whom psychotherapy had proved useless.

More patients of this nature were soon referred to me by Dr. Hamburger as well as by Christine. While there was no way for me to help with any surgery or even a referral to a surgeon, some earnest professional attention to their complaints, psychological guidance, and cautious hormonal feminization went a long way toward making life a bit easier for them. In some cases, my efforts undoubtedly prevented attempts at suicide or self-mutilation—yet, by no means in all cases. These few instances of attempted self-castration by definitely non-psychotic individuals impressed me greatly. Their desperation as well as the entire clinical history with their vain search for help, often from childhood on, made me realize that the medical profession truly treated these patients as "stepchildren." Educational and medical lectures and scientific publications were urgently needed. That became clear to me as I saw more and more the suffering of these tormented people.

In 1953, I had probably examined more cases of gender identity disturbance than any other clinician in the United States. Therefore, I agreed readily to the suggestion of my friend, the late Dr. Emil Gutheil, psychiatrist and editor of the *American Journal of Psychotherapy*, to arrange a symposium on transvestism and transsexualism for one of the

regular meetings of the Association for the Advancement of Psychotherapy.

Shortly before that symposium, I had published the very first medical article on transsexualism in the now no longer existing *International Journal of Sexology* (Benjamin, 1953) at the invitation of its editor, the late Dr. A. P. Pillay. It had appeared early in 1953, but probably found few readers—hence my enthusiasm for Dr. Gutheil's plan.

Transvestism was of course a well-known entity. I thought I could add something to its clinical picture and also to its understanding by introducing the related but much more severe syndrome of a reversed gender-role orientation, for which the term transsexualism had come to my mind as the most appropriate description.

Gutheil, as founder and president of the Association, arranged the meeting and acted as its chairman. I was to read the leading paper and Gutheil and others were to follow with discussions of transvestism mainly, from their respective experiences and standpoints. The meeting took place on December 18, 1953, at the New York Academy of Medicine. It was the first lecture in which the term "transsexualism" was used, although several years previously the late Dr. D. O. Cauldwell had related in *Sexology* magazine (Cauldwell, 1949) the case of a girl who obsessively wanted to be a boy, and he called her condition "psychopathia transsexualis." Whether I had ever read that article and the expression had remained in my subconscious, frankly, I do not know.

Aside from myself who favored an organic or somatic approach and Gutheil who preferred a psychic interpretation, psychiatrist Dr. Danica Deutsch spoke, as well as attorney-at-law, Mr. Robert V. Sherwin, who discussed the legal implications of transvestism and also of the surgical removal of the male genitalia in the performance of a sex-reassignment operation. He criticized the prevailing legal approach.

The entire symposium was published in the *American Journal of Psychotherapy* in April, 1954, under the title "Transsexualism and Transvestism as Psycho-somatic and Somato-psychic Syndromes." Reprints were in unusually large demand, particularly, as Gutheil told me, by Army doctors.

Referral of patients to me now came as frequently from physicians as through other patients and my clinical material grew. As my experience grew, so grew my conviction that estrogens, parenterally and orally, were of great help in calming the tension of the transsexual. In the more serious and intense cases, the medication could do no more than delay but not replace the request for the surgical alteration of the genital organs. Such an operation in these severe cases appeared to me to be the one and only life-saving procedure. Psychotherapy in all its presently available forms had failed utterly to induce these patients to accept themselves in their anatomical and genetic sex. I had become more and more convinced of this fact, inasmuch as several experienced

psychiatrists—experienced in this particular field—had assured me that they felt the same way.

Opposition came mainly from psychoanalytically oriented physicians. One of them predicted, in a conversation, right after the Christine Jorgensen story broke, that within two years, "he" would have committed suicide or would be in a mental institution. Fortunately, Christine had the opportunity to prove otherwise. Her autobiography and her various television appearances reveal a healthy-looking, well-balanced and attractive woman.

Another example of psychoanalytic opposition at this time is found in a letter published in the *Journal of the American Medical Association* by Mortimer Ostow (1953). He denied the justification for ever performing a sex-reassignment operation, as Hamburger and his associates had just previously described it. Dr. Ostow argued: "If a patient has a wish to die, should the physician actively comply with the patient's wish or even condone his suicide?"

This comparison is particularly inept, because it is life, not death, that these patients want and that they seek from their surgeons. Actually some of the transsexual patients feel that the day of their operation is the birthday of a new life for them. A refusal to operate could very well precipitate an attempt at suicide. I have heard threats of this nature repeatedly. But a psychoanalyst is human too and can have his emotional prejudices.

Few references to transsexualism could be found in the medical literature during the ensuing years. It seemed to be not only a *terra incognita* but also a *noli me tangere*. Undoubtedly, in the minds of many in the medical profession, the subject was barely on the fringe of medical science and therefore taboo. There were exceptions, however, especially in the European literature, and in recent years publications have begun to multiply. Wålinder, a Swedish psychiatrist, reported some of his experiences with transsexuals, in a highly scientific, well-documented book, *Transsexualism* (Wålinder, 1967), which was issued simultaneously in Swedish and English.

A urologist of my acquaintance showing a high degree of courage and scientific objectivity at that time (1963) was Dr. Robert S. Hotchkiss, Professor of Urology at New York University School of Medicine, who invited me to speak on transsexualism at New York's Bellevue Hospital. I read a paper there on April 22, 1963, which was submitted to the *Journal of Urology* for publication. It was a full year before it was rejected as "being more suitable for a psychiatric journal." This was not everyone's opinion, however, and in the March-April number of the *Western Journal of Surgery, Obstetrics and Gynecology*, my lecture appeared under the title, "Nature and Management of Transsexualism, with a Report on 31 Operated Cases" (Benjamin, 1964a).

Another opportunity for a medical lecture was the Annual Confer-

ence of the Society for the Scientific Study of Sex, November 2, 1963. I spoke on "Clinical Aspects of Transsexualism in the Male and Female." It appeared in the *American Journal of Psychotherapy* (Benjamin, 1964b).

At the invitation of Dr. John Herman, a lecture followed at the Jacobi Hospital of the Albert Einstein College of Medicine in April, 1964. This lecture, as well as the one at New York University School of Medicine, were repeated about two years later, reporting then on the results of over fifty operated transsexuals.

One of the most distressing incidents occurred on December 22, 1964, when I was invited to testify at a meeting of New York City's Health Department. This was in connection with applications for changes in birth certificates, made by several patients who had undergone sex-reassignment surgery. Before I had a chance to say anything, one Board member, a medical man and internist, delivered a short and scathing rejection of any such application, criticizing at the same time the conversion operation for transsexuals. I have hardly ever heard a more self-sufficient and evidently uninformed tirade.

Applications were for the time being denied, but the problem was referred for an opinion to a highly respected group of doctors from the Academy of Medicine. I was again invited to their meeting on April 26, 1965.

After clarifying the nature of transsexualism my principal argument was that we doctors should be as conservative as possible in advising sex-reassignment surgery or in performing such an irrevocable operation, but *after* it had been done, if we were faced with an accomplished fact, we as physicians should do all in our power to mediate the difficulties of life for these problem patients in their new gender role. I recommended that a new certificate should be granted. I failed in my efforts.

The denial to amend a birth certificate or issue a new one (with the original one remaining on file) was upheld by this medical group, in spite of dissenting voices. The principal reason was that, although the operated patients admittedly were "ostensible females," they were still "chromosomic males." The invisible therefore took precedent over the visible. The psychological sex had to yield to the genetic. Common sense, so it seemed to me, was defeated in New York by a technicality.

Would the same decision be rendered today, I wonder?[1] Is the incident

[1] In 1968, the Civil Court of the City of New York, in Anonymous, 293 N.Y.S. 2d 534 (New York) ruled: "This Court is in complete disagreement with the conclusion reached by the learned committee (New York Academy of Medicine). A male transsexual who submits to a sex-reassignment is anatomically and psychologically a female in fact . . . Accordingly, the application for a change of name is granted, and the petitioner is further directed to file a copy of the order to be entered herein with the Department of Health and said Department of Health is directed to attach a copy of said order to the birth certificate of the petitioner." (Editors)

merely part of a history of progress? Is not the history of medicine full of similar episodes?

By 1965, there seemed to be enough clinical material and enough personal experiences with transsexualism to warrant the writing of a book on the subject. It is called *The Transsexual Phenomenon* (Benjamin, 1966). I conceived and executed the book in such a way as to address it to both the medical profession and the laity. Some chapters are more of a medical nature, such as the one on the operation itself or the possible etiology, and others are meant more for a nonmedical audience, such as the introductory chapter on the "various kinds of sex," and chapters on the symptomatology of transsexualism and on its legal aspects.

In 1967, during my summer practice in San Francisco, brief talks were given at Stanford University at Palo Alto, as well as at the Palo Alto Medical Clinic. I found an unusually interested and receptive audience in both places. But this was 1967, not 1957, and not even 1964. The invitations for these conferences came from Dr. Robert A. Chase, Dr. Donald R. Laub, and Dr. David G. Dibbell at Stanford, and from Dr. Harvey Lash at Palo Alto, all surgeons of wide repute.

During the fall of 1967, at the invitation of Dr. Orion H. Stuteville, the chief plastic surgeon at Cook County Hospital in Chicago, I spoke before this institution's medical staff, and even witnessed one of the sex-reassignment operations there, the second one I ever had occasion to observe. The first one was performed at The Johns Hopkins Hospital in Baltimore the year before, by an expert in hermaphroditic surgery, Dr. Howard W. Jones, Jr., in association with Dr. John E. Hoopes and Dr. Horst Schirmer.

The medical contacts I had made so far, and the reception I had received throughout my lectures, were most gratifying and encouraging to me. But nothing was quite as encouraging and gratifying as the decision by The Johns Hopkins Hospital, where I personally have no official connection whatever, to accept transsexual patients for study by their Gender Identity Committee and, if approved, for treatment and sex-reassignment surgery.

Dr. John Money, psychologist at Johns Hopkins, widely-known and respected for his extensive studies on hermaphroditism and related endocrinopathies and sexual disorders, was probably more responsible than any other individual for the decision that such an august institution as The Johns Hopkins Hospital would take up this controversial subject and actually endorse sex-altering surgery in suitable subjects. This decision testifies to the high esteem in which Dr. Money is held by his medical co-workers. The formation of the committee under the chairmanship of the plastic surgeon, Dr. John E. Hoopes, largely for investigational purposes, but also for the actual care of patients, was officially announced through the *New York Times* reporter, Mr. Thomas

Buckley, on November 21, 1966. This was undoubtedly an important day in the history of transsexualism.

Two days later, a senior newsman of the Baltimore *Sun*, Mr. Weldon Wallace, interviewed thirteen clergymen, representing a variety of faiths, as to the moral aspects of the physical change of sex. There were no moral objections to the procedure by anyone. Only one, an official of the Catholic Archdiocese, declined comment.

Most members of the medical profession everywhere must have been startled by the Johns Hopkins announcement which received world-wide coverage. Many individual doctors, I like to hope, began to re-examine their own opinion on the subject.

Similar progress along the lines of scientific objectivity occurred when, soon after the Hopkins decision, a corresponding program of research and therapy was initiated and officially reported in the press by another renowned and highly respected institution, the University of Minnesota, through its Professor of Psychiatry, Dr. Donald W. Hastings. Hospitals and institutions of equal eminence can now be expected to follow suit and inaugurate research programs of their own, naturally with the acceptance of patients for treatment at the same time.

Early in 1967, a rather striking symptom of progress in attitude occurred in San Francisco. A number of transsexuals in female clothes were repeatedly picked up by the police as prostitutes. Officer Elliott R. Blackstone, with the consent of the Police Department, decided to do something about it. He started procuring legitimate jobs for these transsexuals as women, and was signally successful with some of them. Not with all. Some of them, just as among heterosexuals, preferred the life and hazards of prostitution on account of the higher income and, for the transsexual, possible savings toward their operation. But a move in the right direction had been made possible by the enlightened attitude of a police officer and his superiors.

Also, early in 1967, a Center for Special Problems was started by the San Francisco Health Department, at the suggestion of Dr. Joel Fort. One of these problems was gender-role disorientation. Twenty to twenty-five transsexuals were accepted for counseling and even endocrine treatment. They met once a week, dressed as women, in group therapy. It was my privilege to talk to this group as well as to the staff of the Center in informal meetings.

A personal research program may find brief mention here. In the fall of 1964, Mr. Reed Erickson, chairman of the Erickson Educational Foundation in Baton Rouge, Louisiana, offered me a three year grant to do research with the help of my own clinical material. Naturally, an opportunity of this kind could hardly have been refused, in spite of the additional work burden on myself. With the help of men prominent in

the field of medicine and psychology,[2] psychological and endocrine research was started. Much recognition must go to my unselfish co-workers as well as to those many of my patients who freely gave of their time and efforts to support our studies. The initial results of this research were reported in eight separate papers presented at the First Annual Meeting of the Harry Benjamin Foundation on January 16, 1967, through the generous support of the New York Academy of Sciences, under the chairmanship of Dr. Henry Guze. The publications of all eight papers can be found in the *Transactions* of the Academy of February, 1967. With this most recent event, and now with the publication of *Transsexualism and Sex Reassignment*, descriptions of the highlights of my own work may come to a close.

Here I may be permitted to draw a summary as a clinician from my observations of roughly fifteen years.

Transsexualism may be interpreted as a form of psychic intersexuality the intensity of which varies. It appears to have more than one causation, a neuroendocrine etiology being perhaps the most frequent.[3] So far there is no cure for it.

Some transsexuals may show too much of their morphologic sex in their general appearance and mental make-up. They are handicapped when they want to "change sex" and may have to live with their anomaly, adjusting as best they can to the demands of society without operation. Endocrine therapy and psychotherapy may help them to do so. Others can easily "pass" and, in many instances, their lives can be salvaged through sex-reassignment surgery, and a formerly miserable man can become a reasonably contented woman.

To oppose such surgery in every case as a matter of principle is as wrong from a scientific and human standpoint, as it would be to grant a "conversion operation" merely on request. Extended observation and careful screening seem to me indispensible. Sometimes, I believe, a homosexual with a special preference for normal heterosexual men requests surgery in order to serve such a male partner as a woman. Under such circumstances the operation may later be regretted.

The technique of the operation itself requires further perfection, in order to avoid the present, not too rare, postoperative complications.

Relatively little has been published so far on transsexualism by other investigators in the strictly scientific field. After all, transsexualism, in spite of its sexological ramifications of possibly wide importance, is restricted to a relatively small number of people. How many transsexual

[2] Ruth Rae Doorbar, Richard Green, Henry Guze, Herbert Kupperman, John Money, Wardell Pomeroy, and Leo Wollman.

[3] Among the men who have made a contribution in research on neuroendocrine functions of sexuality in the hypothalamus, one thinks of Charles Barraclough, Frank Beach, Alan Fisher, Bela Flerko, Roger Gorski, Robert Goy, Geoffrey Harris, Seymour Levine, Robert Lisk, Richard Michael, Friedmund Neumann, Charles Phoenix, Charles Sawyer, Richard Whalen, and William Young.

patients may there be in the whole of the United States? Including borderline cases of transvestism, an estimate would be perhaps ten thousand—a small number in proportion to population and compared to other diseases and abnormalities. Therefore, few doctors indeed would find it expedient to spend much time on this problem. The bibliography to be found in my book of scientific articles strictly on transsexualism is meager indeed, although transsexualism is often thrown together, if not confused with, transvestism, the much more frequent abnormality.

A larger number of popular and, alas, too often, sensationalized articles has appeared in newspapers (mostly of rather doubtful reputation), magazines, and paperback books. They may have served the purpose of acquainting the public with the existence of gender-role disorientation and its tragic consequences for the unfortunate victims, but misinformation only too often went with the desire to write something sensational. It was therefore a relief and a sign of progress when, in the fall of 1967, the long-overdue autobiography of Christine Jorgensen was published. It constitutes a soberly written and unusually frank description of an almost classic case of transsexualism, written from within and, therefore, a valuable supplement to medical reports.

Several other transsexual patients have written their life stories, here and in England. A few have been published; more of them exist only as manuscripts. Many of them, published or unpublished, contain valuable data, but unfortunately, it is not always easy in these personal accounts to separate facts from fantasies.

While thanks are due to all the patients who have, with more or less objectivity and altruism, described their deviation, science now eagerly awaits the first truly objective reports from sources like Johns Hopkins and Minnesota and, in years to come, from other investigational places, especially about their therapeutic results and how genetic men or women have been able to adjust to life and society in the gender roles demanded by their psyche but opposite to their anatomy.

The future may see more efforts to solve the riddle of the etiology of gender role disturbances. How much can be psychological? How much may be genetic, how much neuroendocrine? What would be the nature of a predisposition to transsexuality, and how much of a role does it play in the final clinical picture? Can the imprinting phenomenon, as observed in animals, find a parallel in humans? And, to be personal once more, will I live long enough to see the answers to any of these questions?

In several of my lectures, I emphasized the object of my talk by the same words with which I wish to close this sketchy introduction: "I am not here to promote any particular operation or treatment. I am here to try to promote scientific objectivity, openmindedness and—a bit of compassion."

PART I

SOCIAL AND CLINICAL ASPECTS OF TRANSSEXUALISM

CHAPTER 1

MYTHOLOGICAL, HISTORICAL, AND CROSS-CULTURAL ASPECTS OF TRANSSEXUALISM

Richard Green, M.D.

Descriptions from classical mythology, classical history, Rennaissance, and nineteenth-century history plus cultural anthropology point to the long-standing and widespread pervasiveness of the transsexual phenomenon.

The term "transsexual," being of comparatively recent origin, cannot be found in historical sources. Therefore, many inferences must be made in interpreting reference material. Even specific mention of "change of sex" may only imply a "change of dress" or the practice of genital homosexuality, the fuller assumption by the individual of cross-gender identity not being apparent. In the following references, the criterion of cross-gender identity appears to be met.

Mythology and Demonology

In Greek mythology the transsexual influence is dramatized in the the designation of the Goddess, Venus Castina, as the goddess who responded with sympathy and understanding to the yearnings of feminine souls locked up in male bodies (Bulliet, 1928).

Specific myths of sex change, not only as a result of desire but also as a form of punishment, appear frequently. For example, Tiresias, a Theban soothsayer, is reported to have been walking on Mt. Cyllene when he came upon two snakes coupling. He killed the female, and for this act was changed into a woman. Later, after coming to look favorably on his new form and testifying that woman's pleasure during intercourse was ten to man's one, he was changed back into a man—again as punishment (Leach, 1949).[1]

[1] To see snakes coupling is still considered unlucky in Southern India, the theory being that the witness will be punished with homosexuality (Graves, 1955).

Another mythical account concerns the Scythians, whose rear guard pillaged the temple of Venus at Ascelon. The goddess is alleged to have been so enraged that she made women of the plunderers, and further decreed that their posterity should be similarly affected (Herodotus, cited by Krafft-Ebing, 1931). Hippocrates describing among the Scythians "No-men" who resembled eunuchs, wrote, "they not only follow women's occupations, but show feminine inclinations and behave as women. The natives ascribe the cause to a deity . . ." (Hippocrates, cited by Hammond, 1887). Still another account deals with the ancient kingdom, Phrygia, where the priests of the god Attis, the consort of Cybelle the Earth Mother, were obliged to castrate themselves. This was in deference to Attis who was alleged to have emasculated himself under a pine tree. The priests were said (following castration) to become transvestites and perform women's tasks. Some of the priests were believed to have gone beyond testicular castration and completely removed their external male genitalia (Spencer, 1946).

The previously noted Tiresias myth parallels a related folk tale in East Indian lore. According to legend in the *Mahābhārata*, a king was transformed into a woman by bathing in a magic river. As a woman he bore a hundred sons whom he sent to share his kingdom with the hundred sons he had had as a man. Later, he refused to be changed back into a man because the former king felt that "a woman takes more pleasure in the act of love than does a man." Contrary to the fate of Tiresias, the transformed king was granted his wish (Leach, 1949).

Not only were the gods empowered with the ability to change one's sex but change of sex was performed on both human and beast by witchcraft and by the intervention of demons. Witches were claimed to be the possessors of drugs that had the capacity to reverse the sex of the taker.[2] Some said that males could be transformed into females and females into males, but it was also argued that the sex change worked in only one direction. Thus it was declared that the devil could make males of females, but could not transform men into women, because it is the method of nature to add on rather than to take away. In *Malleus Maleficarum* ("Hammer against Witches"), published in 1489, the book which served as the source of "treatment" of the insane for nearly three hundred years, an eyewitness accounting was reported of a girl changed into a boy, by the devil, in Rome (Masters, 1962).

Classical History

Accounts exist from the legacy of ancient Greece and Rome of those grossly discontent with their gender role. Philo, the Jewish philosopher of Alexandria, wrote, "Expending every possible care on

[2] Reference will be made later to an eighteenth-century abbé who claimed to possess a similar drug.

their outward adornment, they are not ashamed even to employ every device to change artificially their nature as men into women . . . Some of them . . . craving a complete transformation into women, they have amputated their generative members" (Masters, unpublished).

The Roman poet Manilius wrote: "These (persons) will ever be giving thought to their bedizement and becoming appearance; to curl the hair and lay it in waving ripples. . . to polish the shaggy limbs. . . . Yea! and to hate the very sight of (themselves as) a man, and long for arms without growth of hair. Woman's robes they wear . . . (their) steps broken to an effeminate gait. . ." (Masters, unpublished).

A satirical description written of some Romans has been translated:

But why
Are they waiting? Isn't it now high
time for them to try
The Phrygian fashion to make
the job complete . . .
Take a knife and lop off that
superfluous piece of meat?

(Juvenal, translated by Creekmore, 1963)

Even among the histories of Roman emperors are reported instances of "change of sex." One of the earliest sex-conversion operations may have been performed at the behest of the infamous Emperor Nero. Allegedly, Nero, during a fit of rage, kicked his pregnant wife in the abdomen, killing her. Filled with remorse he attempted to find someone whose face resembled that of his slain wife. Closest to filling the order was a young male ex-slave, Sporum. Nero then is reported to have ordered his surgeons to transform the ex-slave into a woman. Following the "conversion," the two were formally married.

Another Roman emperor, Heliogabalus, is reported to have been formally married to a powerful slave and then to have taken up the tasks of a wife following the marriage. He is described as having been "delighted to be called the mistress, the wife, the Queen of Hierocles" (Bulliet, 1928), and is said to have offered half the Roman Empire to the physician who could equip him with female genitalia (Benjamin and Masters, 1964).

Interposed between the era of the Roman Empire and Europe of the sixteenth century is a perhaps apocryphal, but still extraordinary accounting of ninth-century Rome. This concerns a figure known as Pope John VIII. The report goes that this person, nominated as successor to Pope Leo IV in 855, was, in fact, a woman. In an accounting published with the approval of Pope Julius III it was stated that "she gave birth to a baby and died, together with her offspring, in the presence of a large number of spectators" (De Savitsch, 1958).

Renaissance Period to The Close of the Nineteenth Century

French history of the sixteenth to the eighteenth century contributed a number of public transsexual figures. Moreover, at this time the term of reference to the sovereign was "Sa Majesté," which means literally, "Her Majesty." The feminine gender was used, initially, in deference to King Henry III of France, who wished to be considered a woman. It is reported that once, during February, 1577, Sa Majesté made his point strongly felt by appearing before the Deputies "dressed as a woman, with a long pearl necklace and low cut dress . . ." (De Savitsch, 1958).

Among the notable Frenchmen of the seventeenth century, the Abbé de Choisy, also known as François Timoléon, has left for posterity a vivid firsthand description of a strong cross-gender wish. During his infancy and early youth, his mother had attired him completely as a girl. At eighteen this practice continued and his waist was then "encircled with tight-fitting corsets which made his loins, hips, and bust more prominent." As an adult, for five months, he played comedy as a girl and reported, "Everybody was deceived; I had lovers to whom I granted small favors." At thirty-two he became the Ambassador of Louis XIV to Siam. Regarding his gender identity he wrote: "I thought myself really and truly a woman. I have tried to find out how such a strange pleasure came to me, and I take it to be in this way. It is an attribute of God to be loved and adored, and man—so far as his weak nature will permit—has the same ambition, and it is beauty which creates love, and beauty is generally woman's portion. . . . I have heard someone near me whisper, 'There is a pretty woman.' I have felt a pleasure so great that it is beyond all comparison. Ambition, riches, even love cannot equal it . . ." (Bulliet, 1928; De Savitsch, 1958; Gilbert, 1926).

One of the most famous examples of cross-gender behavior in history is the Chevalier d'Eon, whose name became the eponym "eonism." He is reported to have made his debut into history in woman's garb as the rival of Madame de Pompadour as a pretty new mistress for Louis XV. When his secret was made known to the King, the latter capitalized on his initial mistake by turning the Chevalier into a trusted diplomat. On one occasion, in 1755, he went to Russia on a secret mission disguised as the niece of the King's accredited agent and the following year returned to Russia attired as a man to complete the mission. Following the death of Louis XV he lived permanently as a woman. There was great uncertainty in England, where he spent his final years, as to whether his true morphologic sex was male or whether the periods in male attire were not, in fact, the periods of impersonation. When he died, the Chevalier d'Eon had lived forty-nine years as a man and thirty-four years as a woman (Bulliet, 1928; De Savitsch, 1958; Gilbert, 1926).

Another case of interest was l'Abbé d'Entragues who attempted to replicate feminine facial beauty "pale and interesting" by undergoing frequent facial bleedings (De Savitsch, 1958). One last pertinent abbé was Becarelli, a false messiah, who claimed to be able to command the services of the Holy Ghost and boasted of possessing a drug which could "change sex." While physical sex was not changed, men who took the drug temporarily believed themselves transformed into women and women thought themselves transformed into men (Masters, 1962).

Finally, a person who through the whole of her adult life had been known as Mlle. Jenny Savalette de Lange died at Versailles in 1858 and was discovered to be a man. During his lifetime he had managed to get a substitute birth certificate designating himself female, was engaged to men six times, and was given a thousand francs a year pension by the King of France with a free apartment in the Chateau of Versailles (De Savitsch, 1958).

The following brief case histories reported by physicians bring the historical European review to the close of the nineteenth century. Bloch described a person of the mid-nineteenth century "who from doing feminine tasks (sewing and knitting) at the bidding of his mother became completely effeminate, plucked his beard, put up his hair, padded his breast and hips, and behaved in every respect as a woman. . . . He called himself Frederica. . . . He managed to deceive (men) so completely that they (unwittingly) performed coitus in anum with him" (Bloch, 1933). Krafft-Ebing reported this firsthand account by a patient: "I feel like a woman in a man's form . . . I feel the penis as clitoris, the urethra as urethra and vaginal orifice, which always feels a little wet, even when it is actually dry, the scrotum as labia majora. In short I always feel the vulva. . . . Small as my nipples are, they demand room. . . . Of what use is female pleasure, when one does not conceive? . . ." (Krafft-Ebing, 1931).

America, too, had its examples of prominent cross-gender identified persons. The first colonial governor of New York, Lord Cornbury, arrived in the New World from England in full woman's dress and so appeared during his time in office. And, a century later, during the Civil War, Mary Walker became the first American woman to be commissioned an Army surgeon and the only woman expressly granted Congressional permission to wear man's clothing (Brown, 1961).

Cross-Cultural Data

American Indians

Anthropologic studies of peoples from many areas of the world furnish varied material on cross-gender behavior and identity.

During the first quarter of this century, extensive data were gathered on traditional practices among several tribes of North American Indians.

"In nearly every part of the continent there seem to have been, since ancient times, men dressing themselves in the clothes and performing the functions of women . . ." (Westermarck, 1917).

Among the Yuman Indians there existed a group of males called the elxa who were considered to have suffered a "change of spirit" as a result of dreams which occurred generally at the time of puberty. A boy or girl who dreamed too much of any one thing "would suffer a change of sex." Such dreams frequently included the receiving of messages from plants, particularly the arrowseed, which is believed to be liable to change sex itself. One elxa, however, reportedly dreamed of a journey. "This dream implied his future occupation with women's work. When he came out of the dream he put his hand to his mouth and laughed . . . with a woman's voice and his mind was changed from male into female. Other young people noticed this and began to feel towards him as to a woman."

As a small child the female counterpart of elxa, the kwe'rhame, were reported to have played with boys' toys. It is alleged that such women never menstruated; their secondary sexual characteristics were underdeveloped, and in some instances were male, perhaps some form of hermaphroditism or virilism (Ford, 1931).

In the Yuma culture it was believed, further, that the Sierra Estrella, a mountain, had a transvestite living inside and that both this mountain and another nearby had the power to "sexually transform men." Signs of such transformation were said to come "early in childhood." Older people were said to know by a boy's actions that he would "change sex." Berdache was the term for those who behaved like women (Bulliet, 1928).[3] Berdaches in the Yuma culture married men and had no children of their own. The tribe also included women who passed for men, dressed like men, and married women (Spier, 1933).

Among the Cocopa Indians, males called e L ha were those reported to have shown feminine character "from babyhood." As children they were described as talking like girls, seeking the company of girls, and doing things in women's style. Females known as war'hemeh played with boys, made bows and arrows, had their noses pierced, and fought in battles. "Young men might love such a girl, but she cared nothing for him, wished only to become man" (Gifford, 1933).

Among the Mohave Indians, boys who were destined to become shamans (priest-doctors who used magic and mediumistic trances to cure the sick, to divine the hidden, and to control the events that affected the welfare of the people), would "pull back their penis between their

[3] Berdache derives from the Spanish, bardaja meaning "a kept boy," and bardashe from French; also Italian, bardascia; Arabian, bardaj (a slave) and Persian, bardah. The Berdache may be variously regarded as (1) a sex-changed person; (2) a man-woman; or (3) a person who is neither man nor woman (Masters, unpublished).

legs and then display themselves to women saying, 'I too am a woman, I am just like you are.' "

For those Mohave boys who were to live as women, there was an initiation rite during the tenth or eleventh year of life. "Two women lift the youth and take him outdoors. . . . One puts on a skirt and dances, the youth follows and imitates. . . . The two women give the youth the front and back pieces of his new dress and paint his face. . . ." Such persons spoke, laughed, sat and acted like women. The initiates assumed a name befitting a person of the opposite sex. These alyhas insisted that their genitals be referred to by female terminology. The female counterpart, hwane, did not insist that their genitalia be referred to as though they were male.

An alyha, after finding a husband, would begin to imitate menstruation. He would scratch himself between the legs with a stick until blood was drawn. When he would decide to become pregnant, he would cease these "menstruations." Before "delivery" they would drink a bean preparation, which would induce violent stomach pains dubbed "labor pains." Following this would be a defecation designated as a "stillbirth," which would be ceremoniously buried. There would then ensue a period of mourning by both the husband and "wife" (Devereux, 1937).

Available anthropologic sources make brief mention of similar practices in other tribes.

Among the Navaho, persons called nadl E, a term used for either transvestites or hermaphrodites but usually the former, were addressed by the kinship term used for a woman of their relationship and age and were granted the legal status of womanhood (Hill, 1935).

The i-wa-musp (man-woman) of the Jukis and other California Indians formed a regular social grade. Dressed as women, they performed women's tasks. When an Indian would show a desire to shirk his manly duties, he would be made to take his position in a circle of fire; then a bow and a "woman-stick" would be offered to him. He would have to make a choice and forever after abide by the choice (Powers, cited by Crawley, 1960).

Finally, among the Pueblo, the following alleged practice was described. A very powerful man, "one of the most virile," was chosen. He was masturbated many times a day and made to ride horseback almost continuously. "Gradually such irritable weakness of the genital organs is engendered that, in riding, great loss of semen is induced. . . . Then atrophy of the testicles and penis sets in, the hair of the beard falls out, the voice loses its depth and compass. . . . Inclinations and disposition become feminine. (This) 'mujerado' loses his position in society as a man . . . his endeavor seems to be to assimilate himself as much as possible to the female sex, and to rid as far as may be all the attributes, mental and physical, of manhood" (Hammond, 1887).

A former Surgeon-General of the United States Army reported on one such person, "The first thing that attracted my notice was the extraordinary development of the mammary glands, which were as large as those of a childbearing woman. He told me that he had nursed several infants whose mothers had died, and that he had given them plenty of milk from his breasts. . . ." (Hammond, 1887).

Peoples Other Than American Indians

In paleo-Asiatic, ancient Mediterranean, Indian, Oceanic, and African tribes, men who adopted the ways and dress of women enjoyed high esteem as shamans, priests, and sorcerers—all persons whose supernatural powers were feared and revered.

Among the Yakut of aboriginal Siberia there were two categories of shamans, the "white" representing creative, and the "black," destructive forces. The latter tended to behave like women. The hair was parted in the middle like women, they wore iron circles over the coat representing breasts, and along with biologic females were not permitted to lie on the right side of the horse-skin in the living quarters (Czaplicka, 1914).

As to the people of Siberia, the change of sex was found chiefly among paleo-Siberians, namely the Chukchee, Koryak, Kamchadeb, and Asiatic Eskimo (Czaplicka, 1914).

Among the Chukchees living near the Arctic Coast, there was reported a special branch of shamanism in which men and women were alleged to undergo a change of sex in part, or even completely. A man who changed his sex was called "soft man being," "similar to a woman," and a "transformed woman." Transformation would take place by tribal command during early youth.

There were various degrees of transformation. In the first stage, the person subjected to it would impersonate a woman only in the manner of braiding and arranging hair. The second stage was marked by the adoption of female dress. The third stage of transformation was more complete. A young man who underwent it left off all pursuits and manners of his sex and took up those of a woman. His pronunciation would change. "At the same time his body alters, if not in its outward appearance, at least in its faculties and forces. The transformed person . . . becomes . . . fond of . . . nursing small children. Generally speaking, he becomes a woman with the appearance of a man." The "soft-man" after a time would take a husband. The "wife" would take care of the house, performing all domestic pursuits and work. Legend had it that some would even acquire the organs of a woman.[4] A transformed woman was described, who donned the dress of a male, adopted the

[4] The change of sex was usually accompanied by future shamanship; indeed, nearly all the shamans were former delinquents of their sex (Westermarck, 1917).

pronunciation of men, provided herself with a gastrocnemius from the leg of a reindeer, fastened it to a broad leather belt, and "used it in the way of masculine private parts" (Bogoras, 1907).

In Madagascar men described among the Tanala as exhibiting feminine traits from birth dressed like women, arranged their hair like women, and pursued feminine occupations. They were known as Sarombavy. Among the Sakalavas of Madagascar, boys who were noted to be delicate and girlish in appearance and mannerisms were selected out from their peers and then raised as girls. Madagascans who were treated as female "finally... regard themselves as completely feminine... The autosuggestion goes so far that they quite forget their true sex... They are exempt from military service" (Bloch, 1933).

In Tahiti a set of men called by the natives mahoos or mahhus "assumed the dress, attitudes, and mannerisms of women, affected all the fantastic oddities and coquetries of the vainest of females...." They had chosen this way of living in early childhood (Turnbull, cited by Westermarck, 1917).

In some Brazilian tribes women were observed who abstained from every womanly occupation and imitated men in everything. They wore their hair in masculine fashion and "would rather allow themselves to be killed than have sexual intercourse with a man. Each of these women had a woman who served her and with whom she was married..." (De Magalhaens, cited by Crawly, 1960; Westermarck, 1917).

A number of Lango men from Uganda, in East Africa, "dress as women, simulate menstruation, and become one of the wives of other males" (Ford and Beach, 1951). Elsewhere in Africa among the Malagasy (men called ts ecates), among the Onondaga of the former Southwest German Africa, and among the Diakite-Sarracolese in the former French Sudan, men assumed the dress, attitude and manners of women (Crawly, 1960). Among the Araucanians of Chile there were reported male and female sorcerers. The male sorcerers were required to forsake their sex (Bloch, 1933).

Sir James Frazer wrote in *The Golden Bough*: [There is] "a custom widely spread among savages in accordance with which some men dress as women and act as women throughout their life. . . . Often they are dedicated and trained to their vocation from childhood" (Frazer, 1955). They were reported to be found among the Sea Dyaks of Borneo, the Bugis of South Celebes, and the Patagonians of South America. In the Kingdom of the Congo, there was described a sacrificial priest who commonly dressed as a woman, and glorified in the title of grandmother. "To the savage mind, the donning of another's dress is more than a token . . . it completes identity . . ." (Crawly, 1960). Among the Zulus, change of sex (by disguise) was a method of changing or averting bad luck. In the Konkan (India) it was usual to bore the nose of a son as soon as he was born to turn him into a girl (Joshi, cited by Crawly, 1960).

On the Aleutians, boys—if they were very handsome—would be brought up entirely in the manner of girls (shupans), and instructed in the arts women use to please men; their beards would be carefully plucked out as soon as they would appear. They would wear ornaments of glass beads upon their legs and arms and bind and cut their hair in the manner of women (Langsdorf, cited by Crawly, 1960). Arriving at ten or fifteen, they were married to some wealthy man (Westermarck, 1917). It was further reported that sometimes if the parents had wished for a daughter and were disappointed by having a son they would make the newborn into an akhnutchik or shupan (Bloch, 1933).

More recently, in mid-twentieth-century India, the city of Lucknow witnessed a great many eunuchs turning up at the polls and joining the line of female voters. The eunuchs, who were dressed in female garments, were reported to have been "amazed" at finding themselves listed as male voters. "Only after the insistence of the police officers . . . did they bow to the law. . . . These eunuchs, though they resist further surgery to make them more female, have their male genitalia amputated, and the pubic area reshaped to give it the look of the female vagina." The event is celebrated by a grand feast restricted to eunuchs (Siddigui and Rehman, 1963).

SUMMARY

The phenomenon of lifelong, extensive cross-gender identification, now known as transsexualism, is not new to either our culture or our time. Numerous descriptions from classical mythology, classical history, Renaissance, and nineteenth century history, plus many sources of cultural anthropology, point to the long-standing and widespread pervasiveness of the transsexual phenomenon.

CHAPTER 2

CHILDHOOD CROSS-GENDER IDENTIFICATION

Richard Green, M.D.

INTRODUCTION

What were transsexuals like as children? Can transsexualism be diagnosed during childhood? Can transsexualism be psychologically treated during childhood?

Clinical interviewing of adult transsexuals designed to obtain data about their childhood behavior elicits an almost uniform response: "I have been this way all my life." When asked to amplify the statement, adult transsexuals assert that "as far back as I can remember I felt different from other (same-sexed) children." They say they felt they belonged to the other sex, disliked dressing as and doing the things expected of a child of their sex, and preferred the dress, activities, and companionship of persons of the other sex. The impression generated is that cross-gender identification did not suddenly spring forth *de novo* with the attainment of voting age, nor even of puberty.

SIGNIFICANCE OF EARLY GENDER-ROLE BEHAVIOR

Research into gender-identity emergence in intersexed children (male and female pseudo-hermaphrodites or the rare true hermaphrodite) dramatizes the profound influence environmental factors may have in determining the direction of gender identity and the significance of early gender-role orientation. Intersexed children, for example, a female with the adrenogenital syndrome or a cryptorchid, hypospadiac male, can pose a problem for the physician as to which sex to designate the infant because their external genitalia at birth may be ambiguous. In some types of hermaphroditism, the external genitalia may appear unequivocally male or female, but there is a contradiction between this criterion of sex and some other hidden variable, for example, the

chromosomal sex, as in testicular feminization. Given two cases of female adrenogenitalism, identical-appearing at birth, with one designated male and brought up as such, and the other female and congruously reared, the former will typically develop a male gender identity, and the latter a female identity (Money, 1963). Furthermore, if subsequent discovery reveals the child reared as a male to be a chromosomal and gonadal female, and an attempt is made to reassign sex as female, it is likely that, if the child is older than between eighteen months to three years, the effort at sex reassignment will fail. When clearly and unambiguously raised as either a male or a female for the first few years of life, a child usually cannot easily or successfully undertake sex reassignment (Money, Hampson and Hampson, 1955; Stoller, 1964a).

The longitudinal personality study of anatomically normal children conducted by the Fels Institute further points to the positive correlation between childhood gender-role behavior and comparable adult activity. Children were rated on sex-typed activities and then evaluated as adults. Among boys, competitiveness and involvement in mechanical, gross-motor, and aggressive games during preschool years were prognostic of sex-role activities twenty years later. Failure to adopt traditional masculine interests among boys was associated with avoidance of masculine erotic behavior in adulthood. Correlations for girls, however, were less significant (Kagan and Moss, 1962).

Diagnosis of Childhood Cross-Gender Behavior

"Oh he'll (she'll) outgrow it." "It's just a passing phase." "All kids go through that. " These are by far the most common adult reactions to childhood cross-gender behavior. In most cases such optimistic exclamations are justified. However, the existence of the adult clinical material on which this volume is based points to the fact that such optimism is at times unfounded.

When reassurance is given that "all kids go through that," it is necessary that *that* be defined. Can *that* be defined with quantitative and qualitative precision required for diagnosis and treatment? Behavioral diagnosis does not carry with it the precision frequently found in the medical and surgical sciences. There are no X-rays, tissue biopsies, or bacterial cultures available for the analysis of cross-gender behavior. Nor are there standardized psychological tests for children aged one through thirteen, yielding a score on which to establish the diagnosis.

Normative data describing gender-role preferences in children at different ages are scanty, and the degree of overlap between the various parameters of gender-role activity of normal boys and girls is considerable. To what extent is dressing in mother's or sister's clothing a normal phase of boyhood behavior? Of one hundred boys, how many do this once, twice, or ten times? Under what circumstances does such

behavior occur? What is the reaction of such children if mother or father forbids dressing up? What percent of boys play with dolls? What kind of doll? How often? And, at what ages? What percent of boys, when playing house, assume the role of mother or sister at age three, five, or seven? What percent of boys, at some point in boyhood, state they wish to be a girl?

Some aspects of gender-role differentiation have been documented in earlier studies: Boys between five and one-half and seven and one-half show a predominantly masculine role preference. This finding emerged from a study in which boys were shown a series of pictures illustrating boys' and girls' toys, clothing, and activities (Brown, 1956). Young boys showed a stronger masculine role preference than did girls a feminine one. After eleven years, the girls' preference became predominantly feminine. In another study, most children at age four identified a male and female doll and correctly identified their own sex. Overall differences between boys and girls were particularly significant in the fifth and sixth years, with an earlier and clearer awareness for boys (Rabban, 1950). Pointing to gender-role identification at a much earlier age was the finding that at age two years, nursery school children are inclined to favor classmates of their own sex (Koch, 1944).

The above data notwithstanding, there is no piecing together of the various behavioral components into a clinical syndrome, a set of variables which, when so constituted at a specific age, signifies an atypical or pathologic process.

Gender identity and gender-role behavior are displayed along several parameters; thus the ways in which boyhood effeminacy or girlhood tomboyishness reveal themselves are varied (Green, 1967a). The transition on each parameter between normal and abnormal is blurred. Cross-gender identity may reveal itself in a child by avoidance of behavior typical for a child its age and gender. Avoidance of any physically competitive activity by some boys may be such an indication. Certainly not all boys who dislike sports have cross-gender identifications. However, an aversion to partaking in the rough-and-tumble of boyhood, coupled with a strong preference for activities, playthings, and playmates of the other gender may well be significant.

Clothing preferences are the most obvious of cross-gender symptoms. However, "dressing-up" is also a common expression of childhood experimental role-playing. Yet, though occasional cross-dressing is an activity of many children, it may appear to be more than merely play-acting. It may represent a definite need, something done over the protests of parents or in secret. Some children become enraged or tearful when denied the opportunity to dress up. The textures and styles of feminine clothing, even when such clothing is not worn by the boy, may be an object of exquisite sensitivity. Cross-gender boys are very much attuned to what their mothers wear. They are critical of her

fashions, pointing out when she is wearing a new dress, is dressed particularly well, or could improve on her appearance.

Behavior—gestures, mannerisms, gait, and speech inflections are other indices of gender-role orientation. Some boys mimic perfectly the normal feminine mannerisms or histrionics of their mothers. In some the exaggeration of femininity is similar to that seen in the "swishy" adult male.

Gender identity is the usually unshakable conviction of being male or female. A boy or girl, though appearing typical for a child his or her age, may silently harbor profound dissatisfaction because that appearance conflicts with the sense of gender identity. One adult male transsexual, studied by the author, had always behaved acceptably as a male, yet remembered very clearly, he says, sitting beneath a tree at age two years crying because he wanted to be a girl. At the time of study, he was taking estrogens and preparing for sex-reassignment surgery. His parents to this day remain unaware of their son's cross-gender identification. Such children are difficult to diagnose. Other children openly state their wish to be a girl: "I'd rather be a girl because boys play too rough."

Playing "house" is a good projective display for revealing gender identity. A boy who routinely assumes the role of mother or sister is communicating something he may be unable to express in words.

The best diagnosticians may be other children. They are quick to label those boys among them who are sissies. Children appear more adept at making such discriminations than adults, perhaps because the clues they detect are those they are still actively discriminating as their own identities emerge. Adults have long since passed these milestones and unconsciously take a certain amount of gender behavior for granted.

The It-Scale for Children is a psychological projective test designed to assess gender-role orientation in young children (Brown, 1956). It is helpful in children from ages four to six, but beyond this interval is too transparent. Seeing through it, an evasive child will conceal his genuine responses. The child is presented with a supposedly neuter cut-out figure (It) which presumably becomes a projected representation of the child. The child then makes a number of selections for "It" from a series of cards portraying toys or activities more typically preferred by boys or girls. Finally "It" is asked to select an adult role from four choices, a normally dressed male and female, a masculine woman, and a feminine man.

The author has also found it useful to present the child with small plastic dolls representing mother, father, sister, brother, and baby. Allowing the child to play with these permits observation of which model is preferred. The child may also be asked to select, in order, his preferred dolls.

The Draw-A-Person test is still another diagnostic tool. The child is

asked to "draw a person." There is evidence that the gender of the first drawn person is reflective of the subject's gender identity. In the series of juvenile effeminates originally studied by Green and Money (1964), Money and Wang (1966) later found that nearly two-thirds drew a girl first in contrast to the usually reported one-fourth for this age group.

The results of none of these tests themselves are sufficient to make the diagnosis of significant cross-gender behavior in childhood but, taken collectively and in conjunction with other observations, plus reports by parents, assist in patient evaluation.

Tomboys

Most reports on adult transsexualism are of anatomic males who want to become females. Similarly, most data on childhood cross-gender behavior concern boys who behave like girls (Green and Money, 1960, 1961, 1964; Zuger, 1966). The reasons may be related though not identical. An adult female transsexual can take on part of the male societal role with greater ease and with less social disruption than can the male transsexual do the opposite. Our culture allows her wider latitude in masculine dress, occupation, living arrangements, and sexual behavior. Also, from a medical standpoint, there is less to offer her in the direction of somatic masculinization. The surgical technology with which to provide a cosmetically and functionally acceptable phallus is still in a developmental stage. Among other factors to account for the disparity between the reported instances of male and female transsexualism may be the neuroendocrine sex difference (see Chapter 9 by Guze and Conclusion by Green) and the well-known but unexplained higher incidence of all the paraphilias in males as compared with females.

Nearly all the children referred to the author and his co-workers, Money and Stoller, for evaluation of cross-gender behavior have been boys. Contrary to sissy behavior during childhood, tomboyishness is recognized and accepted. Many parents will describe with some pride their daughter's tomboyish qualities; however, few will boast of their son's sissy traits. Admittedly, more girls go through a tomboy phase than do boys a sissy phase. Thus, on a statistical basis, tomboyishness may be more accurately designated a normal passing phase.

There are explanations for tomboyishness, other than as an expression of a male gender identity. Boys lead more adventurous and autonomous lives than girls. Girls are aware of the more privileged status of males in their culture. That cross-gender role *behavior* is not synonymous with cross-gender *identity* is revealed by the fact that most of these tomboys abandon or modify such behavior with the emergence of adolescence and the dating age. At least it does not exclude dating and romance. However, not all tomboyish behavior in childhood can be idly dismissed, as is borne out by the case histories of adult female

transsexuals. They describe their childhood so as to sound like the converse of their male counterparts, the sissy boys. Though the early diagnosis of tomboyishness that will become lesbianism and/or transsexualism is difficult, the intensity and durability of such behavior is significant. When a girl openly states her wish to be a boy, insists on dressing boyishly, has masculine mannerisms, shows no interest in doll play, strongly prefers competitive sports and male companions, the alert clinician should be sensitive to the possibility of serious cross-gender identification.

Case History Data

Nine specific examples of boyhood cross-gender behavior are cited in Table 1 to give an indication of the presenting symptoms in a series now under study by the author and his colleagues. The first six were seen in collaboration with Dr. John Money (Green and Money, 1960, 1961, 1964) and the last three in collaboration with Dr. Robert Stoller. These cases have been selected from the larger series because they were the youngest, being eight or younger and clearly prepubertal, when first seen. In six cases, the parents were able to identify cross-gender behavior clearly at age three years or younger.

Interview Excerpts

The following excerpts are from the transcript of the initial interview with the mother of patient number nine, in Table 1.

Presenting Symptoms. He's said that he'd like to be a girl. . . . He is very taken with ballet . . . he wants to always dress as the girl . . . it's always the female part. . . . (He dresses up) as often as you let him. . . . He even tucks animals up underneath his outfit, you know, expecting a baby and then has the baby . . . he's always playing with girl dolls. If he has a choice (in games) he'll dress up as the girl, even when they're just playing house, he's the mother. . . . He loves to play-act . . . he's always been the women. . . .

Age of Onset. I think it started probably about the time his brother was born. There's only twenty-two months difference . . . he insisted he was a girl . . . he wasn't quite two years old . . . stomping around in (mother's) shoes almost from the time he could walk.

Parental Attitude Toward Cross-Gender Behavior. I think (my husband) accepts it better than I do . . . he just felt that he would outgrow it . . .

Relationship of Boy to Mother. I think we had a fairly close, quite close relationship, 'cause I had lots of time when he was little, just the only one . . . I would sit and sing to him and play records, would always carry him around from room to room where I was working. . . . I probably never made him play by himself. . . . I used to sing to him. I'd

Table 1

Patient Number	Presenting Symptoms of Cross-Gender Behavior	Age of Symptom Onset as Recalled by Parents, Years	Age When First Studied, Years
1	The boy had been praying to God to change him into a girl. He had a strong desire to dress in girls' clothing and was inserting building blocks into his slippers to convert them into high-heeled shoes. Mannerisms were effeminate and included wrist-flipping and a mincing gait. He preferred the role of mother in mother-father games and his favorite toys were dolls.	1.5	7
2	The boy wore his mother's clothes whenever he had the opportunity. His mannerisms were effeminate. He played only with girls and avoided boys' games.	6	8
3	The boy played only with girls, dressed up frequently in his sister's clothing, and preferred doing housework such as washing dishes and hanging wash to playing outdoors with boys.	4	5
4	The boy was extremely effeminate, with an effeminate lisp, vocal inflections, gait, and hand gestures. He expressed a strong desire to be a girl, and wanted to wear makeup.	3	7
5	The boy enjoyed wearing high-heeled shoes, dresses, scarfs, and slips and liked to carry a pocketbook. When so dressed he spoke like a girl. He seemed to prefer high-heeled shoes and mother's scarf from the time he learned to walk. He played frequently with dolls and doll clothes. He stated he wanted to be a girl.	2	3
6	The boy had effeminate gestures and an effeminate gait. He always played with girls. He liked to wear petticoats and other clothing belonging to his mother. He wanted a doctor to turn him into a girl.	3	7
7	The boy preferred high-heeled shoes from the time he learned to walk and preferred girls' clothing from age two years. When denied access to girls' clothing, he would fly into a screaming rage. He played only with girls' toys, preferred girls as playmates, and was referred to as a girl by other children when cross-dressed. He stated he wanted to be a girl.	1.5	5
8	The boy dressed up as a girl whenever he could and improvised girls' clothing and wigs. He preferred playing with girls and girls' games. He moved his body and hands like a girl. He stated he wanted to be a girl.	4	6
9	The boy insisted he was a girl at age 22 months. From the time he could walk he stomped around in his mother's shoes. He dressed up in girls' clothing as often as allowed and stuffed animals under his outfit in order to appear pregnant. He stated he wanted to be a girl.	2	5

always hold him on my lap and play with him. . . . I always rocked him to sleep. . . . I always used to . . . up to the time he was three or so, I'd rock him to sleep for his nap.

Relationship of Boy to Father. He's never been close to his dad . . . (My husband) traveled quite a bit . . . like just enough when he was

little that (my son) would forget him by the time he came back, and yet it'd only be about a week . . . it was probably (during) the first couple of years and then also (my husband) had never been around children at all. . . . I think he was sort of scared of handling him and then (my son) rebuffed him and then (my husband) tended to pull back too.

Mother's Tomboyishness and Relationship to Husband.[1] (My son) says, "Why don't you wear a dress more often?" Actually, I'd probably wear slacks all the time. . . . Might have a problem there myself . . . had a twin brother . . . my mother obviously cared for him more than me and . . . I think I tend probably to be a little bit masculine myself maybe as a result of competing with my brother. . . . My husband isn't the athletic type, he's not interested in sports particularly, never has been . . . I tend to be I think a little bit aggressive and domineering with my husband too.

Stage-Acting and Role-Taking

A keen interest in stage-acting and role-taking has been shown by ten of twenty-three young boys with symptoms of marked effeminacy (Green and Money, 1966). This finding is of interest in that it is commonly acknowledged that there appears to be an inordinate number of homosexuals in the acting field (Fenichel, 1946). One may ask the question: Does the theatre attract homosexuals because it offers such persons sanctuary owing to the presence of many other homosexuals, or does the incipient homosexual have specific personality characteristics which will, from an early age and prior to his knowledge of the sanctuary of the theatre, steer him toward acting?

Data from a series of young boys with cross-gender behavior suggest that their acting interest emerged prior to their awareness of the link between homosexuality and the theatre. For example, a seven-year-old boy stated, "I have talent in musicals. In my living room we have a curtain and it's like a stage and me and my friends, we always put on plays." The mother of another seven-year-old boy stated, "He loves to set a stage and sing and he uses this high soprano." Another mother of a seven-year-old said, "The costumes and mannerisms . . . the way he walks and acts, you would think he was a nightclub effeminate man."

Play-acting in these boys served both as an extension of effeminate role-taking and as a device that gave a certain respectability to behaving as a girl. These findings suggest that the high incidence of homosexuality in the theatre is not due solely to the theatre offering them a social haven during adulthood but that play-acting may reflect basic personality traits present since boyhood.

[1] See Chapter 8 by Stoller for elaboration of tomboyishness as a recurring personality characteristic of these boys' mothers.

Parental Reaction to Childhood Cross-Gender Behavior

Rarely will the parents of a five- or six-year-old effeminate boy initiate professional consultation. These parents characteristically explain away or underestimate the significance of their son's insisting on dressing as a girl or playing exclusively with girls. To be fair, it must be said that most family physicians do likewise. Frequently, professional consultation occurs only at the repeated suggestion of a neighbor, teacher, or relative.

Parents and general practitioners do not bear the entire responsibility for a laissez-faire approach to juvenile effeminacy. Specialists may also be to blame. The author has recently seen one adult transvestite and one adult transsexual who were brought by concerned parents during their early teens to a psychiatrist, only to be told there was nothing to worry about. Another patient recently seen is an extremely effeminate twelve year old who, with his mother, was given similar reassurance three years ago.

After postponing until puberty the admission of extensive cross-gender identification in their son, some parents start a vigorous program to "make a man of him." Operating under the pressure of guilt-derived energy, parents may drag the limpid youth into athletics, boy scouts or, worse yet, military school. Needless to say, such endeavors merely increase the misery of an already anguished youngster.

The magical belief in the delayed environmental approach to the correction of gender-role misorientation is not the sole province of parents. Misguided ventures into the military during late teenage with the same goal in mind is frequently heard in the case histories of transsexuals. Marriage is another attempt at escape, similarly motivated and similarly doomed.

Two Families

Boys number eight and nine in Table 1 and their parents are currently receiving therapy from the author. Here follows a brief description of some of the life circumstances of these boys, how these circumstances compared with those of their normal brothers, and the technique of therapy in both cases.

Both cross-gender-identified boys are the first-born of two boys. There are no sisters. Their mothers were both in their mid-thirties before the oldest child, the patient, was born. Both mothers were extremely anxious throughout the pregnancy. The mother of number eight was anxious, first, because she is chronically anxious over everything, and second, because she considered herself quite old to be pregnant. The other mother was anxious because she had miscarried her first pregnancy a few months previously, the first one in a series of efforts to become pregnant through artificial insemination, and was unsure that the second

pregnancy would carry to term. Both mothers were greatly reassured by the successful termination of the first pregnancy, and negotiated the gestation period of the second son with minimal concern. In family number eight, the degree of anxiety and need to protect the first- and second-born brothers differed in degree comparable to the anxiety level during the two pregnancies. The first-born in this family, the patient, reinforced his mother's anxiety over his fragility by reason of physical illness during his first four years, beginning at six months. He had frequent fevers and screaming episodes, eventually diagnosed as due to a congenital urologic anomaly. Hospitalizations and surgery ensued. Maternal protectiveness was probably greater than needed to meet his increased dependency needs. The younger brother was healthy.

In family number nine, the older brother, the patient, though not physically ill, encouraged his mother's attentiveness and protectiveness by being more responsive to being held than his younger brother. Crying would invariably cease when he was picked up, reinforcing this method of child care.[2] The younger brother's response to being picked up would be to cry even louder.

Both of the first-born boys had their mothers exclusively to themselves for two years. The younger brothers were forced to share her attentions. Neither father exerted any great influence in the son's upbringing. In family number eight, the father was a submissive man whose role in the household constellation was closer to that of another boy than of a patriarch. The other father was frightened of the first-born child and would not touch him. Whenever he would return home from a week-long business trip, his son reacted to him as though he were a stranger. This father relaxed considerably and was able to relate more warmly to his second-born.

The mother, father and cross-gender-identified son of family number eight have been seen weekly in conjoint family-therapy sessions. The style of interaction between mother and son, father and son, and mother and father comes quickly into focus in these sessions. Whenever the boy ventures forth with an exploratory gesture of aggressiveness or autonomy, his mother's anxiety increases, and she attempts to disrupt his behavior. When she describes her son's improvisation of feminine costuming, in the context of registering a complaint, she stages a dramatic choreographic display of his behavior when so dressed, and conveys considerably more positive affect than at any other time. Mischievous behavior is described with scorn. The father's meek protests are insufficient to counterbalance mother's masculinity-inhibiting, femininity-reinforcing communication.

Questions from the therapist directed toward both parents regarding, for example, an appointment time are received with the husband turn-

[2] See Chapter 8 by Stoller for comments on excessive maternal physical contact during infancy as a possible factor in the development of male transsexualism.

ing to wife, pausing expectantly, and enabling her to make the decision. During the past few months he has begun taking a slightly more commanding position.

Goals of family therapy are for the husband and wife to gain some perspective on the second-class status of the husband and on the significance of their unbalanced roles in shaping their son's personality. Additional focus is on the masculinity-inhibiting influence of the mother's anxiety over her son's healthy aggression and on her greater comfort with what to her is his less threatening feminine behavior. The boy's fears over bodily injury, in part a residual from the earlier painful genital manipulations necessitated by his urinary tract anomaly, also receive attention. As a substitute for his previous pattern of recoiling from rough-and-tumble activity into dressing and acting as a girl, he is being encouraged to behave as a boy in non-competitive, but still boyish, activity. The therapist's accepting reactions to the boy's boyish behavior during therapy sessions stand in contrast to mother's inhibiting response and present an alternate model to the father for subsequent family interaction.

Therapy with family number nine differs in that the boy is seen separately in individual play therapy sessions and the parents are seen together as a couple or individually. Play therapy is designed to allow the boy free expression of masculine and feminine behavior in the hope of understanding the reasons for the latter and eventually reinforcing the former. Therapy with his parents has focused on their disparate roles in their son's upbringing, the ways in which the wife disparages her husband in the boy's presence, her reasons for her need to relate in an excessively warm manner to her son, and the father's reasons for his aloofness. In the early months of therapy, the father has become more genuinely involved with his son and is regaining many abdicated family roles. Both parents seem earnestly motivated to effect changes in themselves and in their son and they recognize the importance of their own roles as man and woman in shaping their son's outlook on life. Such motivation is unfortunately not always the case in families with a child with severe cross-gender identification.

It is difficult for people to change under the best-motivated circumstances. For many families, the existing husband-wife relationship is the only one capable of sustaining the marriage. For some families, a child becomes the vehicle through which marital discord or the psychopathology of one parent finds expression. Change in the child's behavior would throw the entire family into disequilibrium. In family number nine, however, there is a real effort on the parents' part to reorient the gender-role of the boy who was clearly identified with the female role at age two. It remains to be seen whether, three years later, reorientation of this boy's gender identification will be possible.

The family dynamics described above need not invariably lead to

transsexualism, nor do all transsexuals grow up in such a family setting. All children are not identical at birth. The child may bring with it some ingredient which enables certain patterns of environmental stimuli to "take." Furthermore, children are not merely the passive recipients of environmental stimuli; the child's individualized behavior may also influence parental interaction. The specific variables which result in transsexualism remain unknown; they comprise interaction between experiences and receptive substrata of personality, any one of which might be a necessary but not a sufficient factor when taken singly.

Conclusion

Not until there is a series of treated cross-gender-oriented children matched against a control, non-treated group can it be said with assurance that psychologic treatment instituted at any age is of definite value in gender-role reorientation. Not until long-term follow-up data are available on some of the boys presently under study can it be known whether any of the boys described in this chapter will grow up to be transsexuals, transvestites, fetishists, homosexuals, or without significant sexual anomaly, nor can it be judged what childhood behavior may be considered a harbinger of any of these sexual anomalies.

For the present it can be said that the boys reported in this chapter behave in the way adult male transsexuals say they had behaved when they were young. Psychologic treatment of the adult transsexual by methods currently available is not effective. The finding that gender-role orientation at a young age is subject to environmental influence suggests that early diagnosis and treatment of cross-gender-role orientation may be effective in aborting the manifestations of adulthood cross-gender identification. Even if transsexualism should ultimately be proven to be an inborn anomaly, as many currently insist (Benjamin, 1966), the fact that two anatomically similar hermaphroditic children will readily adopt opposite gender identities consistent with their disparate rearing suggests that early psychologic intervention can influence the gender identity of the developing transsexual. However, hermaphrodites are not morphologically normal children and it may be that the intersexual anomaly predisposes the person to more ready acceptance of environmental influences in the shaping of gender identity. For the present, these must remain speculations.

The material included in other chapters in this volume, describing the anguishing life circumstances that the transsexual currently experiences, speaks for itself as reason enough for developing the childhood diagnosis and treatment of cross-gender-role orientation as a psychiatric frontier.

Summary

Case histories of adult transsexuals reveal that their cross-gender identification and behavior date back to childhood. There is consider-

able evidence from several sources, in particular research on anatomically intersexed children, that gender identity is established early in life. As some cross-gender behavior may be seen in many children, the recognition of a significant disorder of gender identity is a complex diagnostic task. Diagnosis takes into consideration qualitative and quantitative factors and considers such variables as clothing, activity, and playmate preferences and aversions, mannerisms, and the relationship to each parent. Case history data are presented for nine boys, each eight years of age or younger when first diagnosed as manifesting anomalous gender-role development. In six cases, parents were able to clearly identify cross-gender behavior at age three years or younger. When initially evaluated, these boys were behaving in the way adult male transsexuals retrospectively describe their behavior at a comparable age.

CHAPTER 3

ADULT MANIFESTATIONS OF MALE TRANSSEXUALISM

Ira B. Pauly, M.D.

INTRODUCTION

The process by which an individual comes to assume a masculine or feminine role is referred to as gender identification. It has been taken for granted that biological males simply grow up to be masculine and that biological females grow up to be feminine. However, the relatively rare exceptions to this rule have forced us to look more closely into the process of gender identification, and this has become an important area of scientific scrutiny within the last ten to fifteen years. As is so often the case in medicine, an investigation of extreme pathology often leads to insight into the normal process of development.

This chapter deals with a syndrome of disorders referred to as transsexualism, in which the individual has irreversibly accepted a gender identification opposite to that of his normal biological identity. The desire of these individuals to deny and change their biological sex, and to pass into, maintain, and be accepted in the gender role of the opposite sex is so great and intense that it becomes the sole, consuming preoccupation of their lives.

The final and most characteristic expression of transsexualism is the desire to achieve the anatomical appearance of the opposite biological sex, by surgical and/or hormonal means. The so-called "change-of-sex" or "conversion" operation has become possible because of advances in surgical technique after the first such operation was reported (Abraham, 1931). Particularly for the biological male who wishes to be altered so as to closely approximate the female anatomical structure, this procedure has been perfected (see Chapter 22 by Jones) to such a degree that the male transsexual (after surgery) not only appears to be a female, but can function sexually as a female. For the biological female who wishes to assume the male anatomical structure and function, the situation at the

moment is far less advanced and involves more prolonged and complicated plastic surgical procedures (see Chapter 25 by Hoopes). So it is that problems of gender identification which have been known since antiquity (see Chapter 1 by Green; also Pauly, 1965; Pauly, 1968) take on a specific manifestation in modern times because of medical advances which now permit the realization of fantasies of sexual metamorphosis. Since the highly publicized case of Christine Jorgensen (Hamburger, Stürup, and Dahl-Iversen, 1953), there have been increasing numbers of such cases reported in the international literature (Pauly, 1965). The medical profession and society generally must deal with the moral implications of this unusual disorder of gender identification (Pauly, 1968; also, Chapter 15 by Green, and Chapter 17 by Money and Schwartz).

Although there are some common denominators and similarities in transsexuals, it should be emphasized that there are differences as well. This is a syndrome in which gender identification develops contrary to genital identity. Certainly we are dealing with a spectrum or continuum in this process in which every individual occupies a particular place. Not only are there behavior gradations between the abstract concepts "totally male" and "totally female," but there are chromosomally and hormonally determined intersexed conditions. Therefore we must discard the biblical polarity of the male-female, masculine-feminine dichotomy, and reorient our thinking along a scale of subtle nuances of behavior. We are concerned with the extreme end of this spectrum when we consider individual cases of transsexualism. But even at the extreme, there are differences. It is hoped that a presentation of cases of both male and female transsexualism will illustrate this point more clearly.

The first patient, A.D., was seen on two occasions in July, 1966. Although a biological male, this individual has lived as a female for the last four years and has passed and been accepted by society as a female. Therefore, A.D. will be referred to in the feminine gender, as it would be inconceivable for me to refer to this person in any other manner. I consider A.D. to be an excellent example of male transsexualism and her story is quite typical of that which the true transsexual presents.

Case Report Number One

A.D. is a twenty-three-year-old morphologically normal male who since age nineteen has been living and passing as a female and is accepted as female by all who know her and work with her. Six months prior to seeing me she obtained plastic surgery for breast augmentation and was pleased with the excellent results. She had become very frustrated and depressed because she had been unable to obtain the final step in her transformation to the female status. If she were not suc-

cessful in obtaining the "change-of-sex" or "conversion operation," she feared she might do something desperate. By this she meant that she had contemplated both suicide and self-mutilation of the genitalia in hopes that this would force the situation to such a point that she would be able to obtain sex-reassignment surgery. The immediate reason for her contacting me was because of specific suicidal ideation which became progressively more intense over the preceding four weeks.

She gave the following past history (in the relating of which I will revert to the masculine pronoun because A.D. was accepted by his family and everyone who knew him then as male until the age of nineteen when he permanently assumed the feminine role): His father was a nondenominational minister who traveled frequently when A.D. was young; the family moved quite often, so that the child was never in the same school for longer than one year. Very little was said of the father other than the fact that he was frequently absent and certainly not an important member of the family. Toward his mother, A.D. felt and still feels "very close" and has tremendous admiration for her as "an ideal person." His earliest memory reveals something of the relationship: "I was on a wall and tried to catch a pigeon, but I fell and cut my knee and my mother nursed the wound." Even today, A.D. thinks of mother frequently and corresponds regularly with her.

As early as he could recall, A.D. related, "I never had any normal interests and wanted to become a girl and change my name to Pat or Frances." He recalled loving to dress in mother's clothes and preferred always to play with feminine things and toys. On one occasion, when he was given a fire engine, he became very upset and cried, saying he wanted a doll. There was almost constant conflict between A.D. and his parents when he insisted upon being accepted as a girl. However, in the fourth grade, he was successful in persuading his parents to allow him to have his own way, except that he had to wear boy's clothes to school. Subsequently he was relatively happy, leading a kind of double life—attending school dressed as a boy and doing quite well, and then returning home to dress and live as a girl. By the time he was in the eighth grade, he recognized that he was very different from others and began to feel awkward and uncomfortable around people. Male students teased him for being effeminate and A.D. began avoiding school. He developed symptoms which in retrospect appear psychophysiological, forged notes to justify absences, and then took long walks alone in the woods.

At age fifteen he left home because of strife in the family, increasing particularly as a result of his progressively effeminate behavior. School and social interaction therein had long since become unbearable. He moved to a large city where he worked for two years as a bus boy and generally tried to get lost in the crowd. He then moved to San Francisco and experimented with homosexuality. He became involved with a

homosexual crowd, but he could not tolerate homosexual males and discontinued this after only four weeks. Certainly he was attracted to men as sexual partners, but only normal men who were heterosexual and who would accept him as female.

At the age of nineteen A.D. saw Dr. Harry Benjamin who was the first person to offer help. Female hormones were prescribed, and A.D. began to cross over to the feminine role completely and permanently and never since has she (I will revert here to the feminine pronoun again) regretted this.

At this time A.D. underwent an extensive course of electrolysis for the removal of facial and chest hair and since nineteen years of age has been accepted unquestioningly as female. As mentioned earlier, a breast augmentation plastic surgery gives her the appearance of having well-developed breasts, and she continues to take female hormones.

On one occasion A.D. sought psychiatric help because of her frustration and difficulty in obtaining the wished-for conversion operation. After twelve sessions she stopped the treatment and reported this as a very negative experience because the psychiatrist refused to accept her as female and insisted that she become a man again. She is quite angry at the medical profession generally and hostile because of her experiences with certain professionals whose attitudes were similar to those of the psychiatrist just mentioned. On the other hand, she is most grateful to those who have helped her, but still frustrated because she has been helped to a point but cannot obtain an operation for the removal of her offending organs and the creation of a vagina. She is quite knowledgeable about the surgical procedures which are available. She is aware that the procedure is performed outside the United States but is fearful of obtaining a passport which would identify her as a male. At this point she is unwilling to give up her female status even temporarily. Finally, although initially confused and unwilling to understand, her family has accepted her as female, and will now help her in any way they can.

Recently, A.D. has worked as a cocktail waitress and says that "men won't leave me alone." She claims she tries very hard to discourage their attention. She would not dream of getting physically close because of the mortification she would experience at being exposed as having male genitalia. On the other hand, she abhors homosexual men, does not consider herself to be homosexual, and would consider a relationship with a female with the same aversion that most heterosexual individuals would have for a homosexual relationship. Thus she feels cut off from people, avoids getting close, and frequently moves from job to job and place to place after a relatively short time.

On psychiatric examination, A.D. presented as a young, attractive woman, about the female status of whom there was no question. Unlike many male transsexuals, she was not hyperfeminine and exaggerated

in her mannerisms, but assumed the female role quite comfortably, naturally, and convincingly. Her voice was high-pitched and unremarkably feminine. Facial expressions revealed good affect, although she showed some evidence of depression and recent weight loss. There was nothing unusual or bizarre about her appearance and behavior. Speech was unremarkable, with normal latency and duration of utterance, and there was no evidence for a psychotic thought disorder. Mood was described: "I can't even understand myself, it scares me. I used to be happy-go-lucky, but lately I've become very depressed." Only two days prior to being seen she had considered jumping from a high building. For the preceding three months she had slept poorly, her appetite had decreased, and she had lost approximately thirty pounds. She felt that people treated her quite well and was confident that she has not been conspicuous in any way. Thus, she had no paranoid ideation, other delusions, or hallucinations. She was preoccupied about obtaining the conversion operation and pursued this goal with compulsive determination. Memory and orientation were intact; she recalled three unrelated words after five minutes, and there was no evidence of organic psychopathology. She performed the serial subtraction of sevens with two errors in two minutes. General fund of information was adequate and consistent with her limited formal education. IQ was estimated clinically as average. Abstract words and proverbs were interpreted well, and again, there was no evidence of a psychotic thought disorder.

Admittedly, the family background is not known in detail, as the patient was seen only twice. Contact with her family was not possible, so the history has not been confirmed. However, it is significant that the stories presented by many male transsexuals correspond very closely to this one. In Wålinder's excellent study of thirty male and thirteen female transsexuals, there was excellent confirmation of similar stories given by transsexuals when the individuals' parents were seen (Wålinder, 1967). Whether fact or fantasy, this is a typical story of the early childhood history as presented by the adult male transsexual. Typically, the father is recalled as cold and aloof at best, punitive and rejecting at worst, but most often absent or ineffectual and providing no adequate model for identification. On the other hand, there is quite often a very close relationship with the mother. In addition to the extreme dependency and symbiotic relationship hinted at in this case, Stoller describes in much greater detail other etiological contributions on the part of the mother (Stoller, 1966a, 1968, and Chapter 8). This includes excessive body contact at a critical period, wherein the male child does not develop a sense of body ego distinct from that of his mother. The numbers of cases of male transsexualism studied intensively from an early age, together with a similarly intense study of the mothers of such individuals, are too small to validate Stoller's compelling theory, but his work cries out for confirmation.

The age at which they consciously felt as though they belonged to the opposite sex was prior to age five in two-thirds of cases reported by Wålinder. More often than not, these biological males had demonstrated considerable cross-gender behavior much before puberty: played exclusively with children of the other sex (63 percent); acted like, and played games of the other sex (67 percent); were embarrassed by undressing in front of the same sex (60 percent); and felt as though they belonged to the other sex (90 percent) (Wålinder, 1967). Thus, these boys preferred to play with dolls, to sew and embroider, and to help their mothers with the housework as much as possible. Contrarywise, they refused to get into the more usual boyhood activities, such as to participate in sports, roughhouse, climb trees, play cowboys and Indians, etc. Whereas many began to cross-dress very early, only 37 percent continued to cross-dress even occasionally, until after puberty when male transsexuals cross-dressed occassionally in 50 percent of the cases and consistently in 43 percent. Also, after puberty, these boys became increasingly disgusted with their developing male anatomy (100 percent), became increasingly convinced that they belonged to the female sex (100 percent), wanted to be accepted by society as females (100 percent), and desperately desired a change-of-sex operation (100 percent). The intensity of this desire is dramatically portrayed by acts of genital self-mutilation which occurred in eighteen of the one hundred male cases reviewed from the literature (Pauly, 1965).

A.D.'s overt sexual behavior is quite typical of what most male transsexuals report. There is no question that A.D. preferred a male sexual partner, as did 93 percent in Wålinder's series. Whereas almost all male transsexuals say that they are excited mentally by males, and most emphatically, by normal (heterosexual) males and *not* homosexual males, and while they imagine themselves to have sexual relations with men in their masturbatory and non-masturbatory fantasies, only 39 percent (Pauly, 1965) to 53 percent (Wålinder, 1967) report overt sexual behavior with men. On the other hand, 20 percent (Wålinder, 1967) to 43 percent (Pauly, 1965) reported chiefly heterosexual experiences and the majority of these were in marriage. However, they were invariably dissatisfied with their heterosexual activity in or out of marriage, and felt that acting as the male partner was wrong and unnatural. Of the male transsexuals who had married, over half subsequently divorced, and the remainder strongly wished to do so but felt obligated to their wives and families. Most of these were greatly troubled and often depressed by this discrepancy.

Quite often the male transsexual has a weak (20 percent) or only moderate (64 percent) sexual urge or libido, whereas only 16 percent are thought to have a strong sexual desire (Wålinder, 1967). Speaking anatomically, there is no question that the transsexual's sexual object preference is homosexual. However, speaking from a gender-role orien-

tation, his choice is clearly heterosexual, as he considers himself to be female. It is unwarranted to interpret this syndrome simply in terms of homosexuality. Actually the sexual motive in the majority of cases is quite secondary to the overwhelming gender-role reversal. It is important diagnostically, theoretically, dynamically, and from treatment considerations to distinguish between the sexual and gender motives. On the other hand, it is not denied that approximately 20 percent in Wålinder's series did specify that they desired a change of sex primarily for erotic purposes. It is interesting that this percentage corresponds quite closely to the 16 percent who were thought to have a strong sexual drive. In the small percentage who appear to seek the operation as a means of rationalizing or justifying their primary homosexual desires, the term pseudotranssexual might be considered. In these particular individuals, it would be most important to document the history of life-long gender reversal from other family members. Certainly the strength of their denial of homosexuality, and their abhorrence of this, suggest the possibility of an underlying sexual motive in some.

As stated before, not everyone requesting a change of sex does so for the same reason. At the present state of knowledge, or perhaps ignorance is the better term, all such requests are thrown into the same category and labeled as transsexualism. However, the evidence suggests that the true transsexual, as distinct from the pseudotranssexual, demonstrated marked and persistent gender role reversal long before he ever knew what homosexuality or genital sexuality of any kind was. Most homosexuals, with or without gender role reversal, enjoy the use of their genital organs and would never consider their removal. Contrariwise, the transsexual lives only for the day when he can rid himself of his hated genital organs. It is possible to interpret transsexualism as an escape from genital sexuality, which would place this syndrome in a very different category from homosexuality.

Special care was given in the mental status examination to document the absence of psychosis in A.D. Some might assume such a person to be psychotic simply on the basis of his request alone. This is not generally the case, although approximately 20 percent of one series (Pauly, 1965) were thought to have had psychotic episodes or require hospitalization, whereas in another series none of forty-three transsexuals were psychotic (Wålinder, 1967). The most frequent psychopathology is depression, so that A.D. is also typical in this regard. Some 67 percent of the male transsexuals were thought to suffer intermittent depressive reactions, with suicidal ideation (60 percent), and actual suicide attempts in 17 percent (Pauly, 1965) to 20 percent (Wålinder, 1967). Given the intensity of their desire for sex-reassignment surgery and the formidable obstacles to this operation, the fact that so few actually decompensate and become psychotic is rather surprising to me. A.D. had contemplated mutilation of his genitalia, which is related to the

abhorrence of his genital organs and the need to rid himself of the constant reminder of his male sex. Self-mutilation in the form of autocastration or autopenectomy was attempted in 18 percent and accomplished in 9 percent of one series (Pauly, 1965). As in A.D.'s case, the motive of such an act, whether it be considered a suicidal equivalent or an attempt to rid himself of unwanted genitals, might include the hope to persuade the physician to accede to his wish for surgery. A.D.'s depression did not last long and the patient responded to supportive therapy and an antidepressive medication.

Unless one has actually had the opportunity to talk with a transsexual person, it is difficult to imagine how completely they do "pass" (Stoller, Garfinkel, and Rosen, 1960) as members of the opposite sex. It is an experience in cognitive dissonance to see someone known to be biologically male who yet appears in every regard to be female. In an attempt to resolve this dissonance, one can either deny the apparent female status or suppress the fact of the male anatomy. One tends to believe that which is most readily apparent, and thus accept these people as they appear to be, namely as females. The success of their passing depends partly on their physical characteristics and partly upon the degree to which the cross-gender behavior has become automatic and no longer requires conscious attention. In the true transsexuals there is no question of, or ambivalence about, the gender preference, for the identification has been completed for some time at the point when they appear before the physician requesting sex reassignment. A.D. is an excellent example of a transsexual whose feminine appearance is so convincing that she passes without question. In others, however, there is the need to overdo and exaggerate the feminine characteristics and thus their behavior becomes a caricature of women's behavior. This clinical impression is confirmed by psychological studies which show that male transsexuals as a group score higher on femininity scales than a control group of normal women. Interestingly enough, this is not true of female transsexuals who as a group appear to accept their masculine role more naturally than their male counterparts (Wålinder, 1967; Stoller, 1966b, 1968).

Finally, A.D. shows the progressive and unrelenting manifestations of transsexualism from early childhood to adulthood. The gradually increasing feminine identification began with those things she could control herself, such as dress, mannerisms, voice, hairstyle, make-up and general behavior. Then at the point when outside help was needed, a physician became involved, hormones were prescribed, electrolysis was sought, and plastic surgery was requested. Clearly there is no turning back for A.D. and there is every indication that, for her, the sex reassignment procedure is indicated and that her prognosis for better adjustment after the conversion operation is very good. I would anticipate that she would then marry and be quite content to remain inconspicuously

in the background and never let it be known she was ever male. However, such is not always the case, as is seen from the fact that approximately 18 percent of one series of fifty-one operated male transsexuals became part or full-time prostitutes (Benjamin, 1966). More rarely, the operated transsexual takes advantage of her unique sexual status and transformation and becomes a female entertainer or reveals her "story" (Jorgensen, 1967), possibly with sensational headlines. One questions the motives of such persons and to what degree their primary goal is exhibitionistic or one of financial gain. The transsexual is not immune from sociopathic tendencies.

Case Report Number Two

R.N. was thirty-two years of age when admitted voluntarily to the State hospital in July, 1966, having been referred there by the local suicide prevention center because she was contemplating throwing herself in front of a moving automobile or off a high building. This was her first psychiatric admission. The patient explained that she had been a biological male and had a conversion operation one and a half years earlier, in January, 1965. Since the surgery she had some postoperative complications, including a recto-vaginal fistula which was repaired the year before. She had been able to pass undetected as a female and dated frequently, having sexual intercourse regularly with several different partners; she received several proposals of marriage.

The patient moved to this city seven months before admission and during this time had held many different jobs, including secretarial positions and ten to fifteen jobs in bars and taverns working as a cocktail waitress. At the least altercation or unpleasantness, she would quit her job without notice or even asking for her wages. She continued to date regularly, usually going out with someone she met while serving drinks. She reported having intercourse approximately twice a week, saying "I don't enjoy it—I'm simply going through the motions," in order to maintain men's interest in her.

The patient was concerned about several things. She was quite self-conscious of her small breasts and was contemplating silicone therapy. Although she preferred the female role, she knew she was "different from other females." She felt she was not fully accepted by others although she integrated well socially on a superficial basis with both males and females. She was preoccupied with the fear that others might discover her sex change, saying, "I'm not going to fool everyone." On the other hand, she felt often compelled to tell others of her sex-reassignment surgery, in spite of anticipated scorn and ridicule from them. Ultimately, she hoped to marry, but she believed that she would be unable to keep her past life a secret, which would result in her being rejected. The above problems, together with her difficulty in maintaining employment, resulted in depression and suicidal ideation.

R.N. was a normal male at birth in 1934. The father, aged fifty-three at the time of her admission, a mechanic in good health, was described as "somewhat submissive" to his wife's demands. The mother, aged fifty-four, a registered nurse, was described as somewhat dominating. The details of the family interaction are not known. There is a sister, nine years younger than R.N., who was always a tomboy and who detested her feminine role and wanted to be a boy. This sister subsequently married, divorced, and worked as a cocktail waitress. Sex was never discussed in the family.

R.N. gives the typical story of cross-gender behavior and role preference from an early age. In high school, the patient was obviously effeminate but still accepted, and he participated in extracurricular activities. Because he refused to undress in a group, he was excused from physical education, as the teachers felt sorry for him. At home, R.N. was responsible for the housekeeping and cooking, which he enjoyed, and the parents accepted his behavior without overt comment or criticism.

Following graduation from high school, R.N. read of the change-of-sex operation and immediately decided that he must have this operation himself. He began to save money for it, and at twenty-two moved to San Francisco where he began to engage in homosexual activities, in both the passive and active roles. He stated that these activities were very distasteful to him and that "sex makes me ill." During this time he met eleven individuals who had previously had sex-reassignment surgery and he stated that all of them seemed quite satisfied with the results. He obtained electrolysis for the removal of facial and body hair, began taking female hormones, and then dressed continuously as a female. Also, R.N. consulted a psychiatrist, in preparation for the anticipated operation, in hope of making a satisfactory adjustment. The operation was performed in January, 1965, and after the surgery, R.N. continued on estrogen therapy.

On examination, R.N. resembled a female impersonator with a deep voice and rather masculine body build. She was approximately 5 feet, 8 inches tall and weighed about 160 pounds. She was quite exaggerated in her feminine mannerisms, a characteristic previously commented upon. She was logical and coherent, although initially there was some suspicion of a mild thought disorder. The patient admitted to auditory hallucinations and ideas of reference up to two months prior to admission. There was no evidence of organic psychopathology, and IQ was estimated to be above average. Initially, there was some question of a chronic schizophrenic reaction, but as the depression lifted, she was diagnosed as a schizoid individual with a tendency to isolate herself and keep people at a distance with aloofness and politeness. After thirty-five days she was released from the hospital as improved with reference to her depression, but still struggling with the problem of gender identification.

The case of R.N. is presented to balance the picture portrayed by the first case. Obviously, the sex-reassignment operation is not the panacea which the transsexual hopes for. Despite her operation, R.N. is still experiencing intermittent depressive reactions with suicidal ideation. Having obtained one operation to create a vagina, she is now seeking another to enhance the size of her breasts. It is not unusual for transsexual patients to request more and more surgery of various kinds. Occasionally they are dissatisfied with the appearance of the labia and have doubts that their genital appearance is convincingly female. Transsexuals feel commonly that their breasts must be a particular size and shape and sometimes they request that their face be changed to conform with their notion of the ideal female appearance. Finally, the ultimate request is for implantation of female organs, ovaries, and uterus so that conception and birth are possible. At the moment, this latter request is beyond medical science's capacity to respond. It is characteristic for the true transsexual to push beyond the limits of what is possible and to settle for nothing less than that which is conceivable. This disturbing polysurgical attitude and the restless striving for the ideal female form caused Stoller to remark: "The general rule that applies to the treatment of the transsexual is that no matter what one does—including nothing—it will be wrong" (Stoller, 1966b). It should be stated that R.N. is the exception rather than the rule. Most patients do better after sex-reassignment surgery than before. This patient is probably one of nine doubtful outcomes in a series of seventy-three operated male transsexuals, in whom the vast majority (sixty-two) had a very good or satisfactory result (Benjamin, 1967b). The results of sex-reassignment surgery have been reviewed elsewhere (Pauly, 1968) and in this volume (Chapter 26 by Randell).

R.N. is also a typical in that her mental status raises the question of psychosis. As stated earlier, the majority of transsexuals do not demonstrate overt psychosis. The depressive episodes can be of psychotic proportions, and it is highly unlikely that their gender misidentification should protect them against more serious decompensation. R.N. is typical in that she has insulated herself, is aloof, and avoids close interpersonal relations. Frequently, the diagnosis of schizoid personality is used to characterize this tendency, as well as the borderline relationship which this condition has to schizophrenia. However, arbitrary diagnostic considerations need not concern us unduly.

Lest one is left with the impression that the surgery was not indicated in this case, or that it resulted in the patient's becoming worse, one can only speculate what would have happened if she had not been operated upon. Despite her fears of being detected and her repetitive need to confess the truth, R.N. is still more comfortable with her feminine role than with a masculine one. It could very well have been the case that R.N.

would have committed suicide had she not been able to obtain the operation.

Finally, it should be stated that once the process of gender identification has reached the point of completion, it becomes impossible to modify (Pauly, 1968; Stoller, 1968). There are no reported cases in which psychotherapy has been successful for transsexuals in the direction of helping them to accept that gender identity which is consistent with their anatomy, nor have other forms of therapy, such as hypnosis, aversion deconditioning, chemotherapy, electroconvulsive therapy, or behavioral therapy, been successful in this regard (Roth and Ball, 1964; Pauly, 1965; Benjamin, 1966; Editorial, 1966; Stoller, 1966b; Wålinder, 1967). However, the therapist is often quite helpful if he supports the transsexual in his preferred gender identity, as seen from the first two cases. There is evidence that such a patient can be pushed into psychosis at the point where the well-meaning therapist is beginning to congratulate himself for "curing" the transsexual of his gender misidentification (Don, 1963; Pauly, 1966).

There is considerable clinical evidence from studies of human hermaphrodites that gender identity is established early, and once established firmly, is difficult if not impossible to reverse (Money, Hampson, and Hampson, 1955; Money, Hampson and Hampson, 1957; Hampson and Hampson, 1961). Reports of successful reassignment of gender in some hermaphrodites (Dewhurst and Gordon, 1963) may cast some doubt on this premise. Stoller, however, has clarified this apparent contradiction by introducing the concept of a hermaphroditic or ambivalent gender identity in some hermaphrodites. A change of apparent gender identity is possible only if the core gender identity had never been well established initially (Stoller, 1964b). Thus, it becomes essential to determine whether the core gender identity has become firmly established, for once it has, treatment directed at changing it is fruitless at best, and harmful at worst. In most cases, the adult transsexual is well fixed in his cross-gender identification by the time he seeks medical attention. He is not motivated to correct his gender misidentification any more than an individual with the correct gender identification would be motivated to change. These facts impress one with the importance of prevention through parental education. If treatment is ever possible, it must come at an early age, before the process has become complete. Childhood transvestism and other cross-gender manifestations must be looked upon as potentially malignant symptoms, with early detection and referral for therapy being essential (Green and Money, 1960; Stoller, 1968; Chapter 2 by Green).

In the first two cases, the male transsexuals had actually passed into the opposite gender and were living and accepted as females. The next two patients have not reached this point, although both prefer the feminine role, cross-dress intermittently, desperately seek sex-reassignment surgery, and thus are categorized as male transsexuals.

Case Report Number Three

H.W. is a thirty-year-old Mexican-American biological male, who worked as a male aide in a private hospital and who was seen for evaluation in October, 1966. For as long as he could remember, the patient had felt different from other boys and had had a definite affinity for the female role. He described his father as a punitive and brutal man who "gave me a beating every time I turned around." The father had died four years earlier and apparently this was no great loss to the patient. His mother died when H.W. was approximately thirteen years of age and he was able to recall very little about her. As a matter of fact, he claims to have very poor memory for childhood—a characteristic not uncommon for transsexuals (Delay, Denicker, Volmant, and Alby, 1956; Worden and Marsh, 1955; Pauly, 1965). Therefore there is very little past history, particularly because there is no member of the family to substantiate it. It is known, however, that the father was hospitalized in a mental institution because of a depressive reaction subsequent to his wife's death. There are three older brothers, fourteen, nine, and seven years older than the patient, the last of whom had been hospitalized because of alcoholism. Past hospital records indicate that the father was a rather religious person who would not allow his children to bring their friends home. None of the children were allowed to go to dances or participate in any other types of entertainment. The mother was protective and frequently defended the patient against his father. She was described as a kind and friendly person who did not object to the patient playing with dolls or indulging himself in other feminine interests. The patient went as far as the seventh grade in school and was a fair student. After his mother's death, when he was thirteen years of age, H.W. was expected to take care of the home. Thus, after working in the fields all day, he would have the responsibility for cleaning the house and cooking the meals. He denied that there was any overt attempt on the part of anyone in the family to force him into the female role beyond the expectations of taking care of the home.

H.W. claimed that at age twelve he was seduced by an older man, and since then has been attracted to men sexually. He enjoys assuming the passive role in a homosexual relationship and is usually excited by having anal intercourse performed on him. He says, "women do nothing for me," and he has attempted heterosexual intercourse on numerous occasions but has never been able to ejaculate or reach a climax. More recently, he has not been able to enjoy a homosexual relationship except when he is a passive partner and this only when it involves anal stimulation. After the age of eighteen, he would dress up as a female, go into bars, and attempt to pick up a man. However, he would never attempt to deceive his partner, and would tell him he was actually a man. When he was twenty years of age he was arrested for transvestism and then was

committed by the court for psychiatric evaluation at a state hospital. At that time, approximately nine years ago, he requested to have his sex changed to female. He had asked for help in this regard voluntarily but if his sex could not be changed to female then he wanted help to adjust more comfortably to the male role. On admission to the hospital he was dressed as a woman but was not permitted to remain in that role.

Since his discharge from the hospital in 1958 he has been actively seeking a change-of-sex operation. He continues to take the passive role in a relationship with a male partner as frequently as he can. He states a preference for a nonhomosexual individual who will accept him as a female. His work record has not been very good and he has moved from job to job. Only a few months prior to being referred to me he consulted with a private urologist in hopes that he might obtain a change-of-sex operation.

On psychiatric examination the patient was dressed in casual clothes of the male type, with black boots. His walk and gestures were so obviously effeminate that they were grossly exaggerated. He was small in stature, was approximately 5 feet, 1 inch in height and weighed about 115 pounds. Affect and speech were appropriate and there was no evidence for a psychotic thought disorder. A mood statement was, "lonely . . . not too much to live for . . . if you don't have love, you don't have nothing." He denied suicidal ideation with this comment: "I don't want to die, I want the freedom to live. I am a prisoner in my own body. I'm just a homosexual and I want to be something else." The patient stated in the last two months he had had some sleep difficulty and this had occurred since he had been taking testosterone. Other than his preference for the female role, there were no special preoccupations. He specifically denied delusions and hallucinations. He denied any other antisocial behavior except the one arrest for transvestism. Memory and orientation were intact and he recalled six digits forward and three in the reverse direction. He was able to recall only four out of twenty-six responses in the Cowboy story and performed very poorly on the serial subtraction of sevens. General fund of information was below average and his IQ was estimated clinically at dull normal. He was unable to make good interpretations of proverbs.

Of particular interest is a communication from the patient in which he describes a rather interesting fluctuation in gender identification. I will quote from his letter:

> Every time I talk to you, you catch me in a female mood and I can't talk about my other part of me. You see I have two ways of feeling. I can feel like a female for about thirty days and maybe one or two days, I feel like a male. But when I feel like a female, I don't want you to know that there is times that I feel like a man, and if you catch me feeling like a male I don't want you to know that there is times I feel like a female. Today I

feel like a man. I would like to go out with women. I would like very much to leave the state and go back to Colorado. There is a girl that I used to run to every time I feel like this. I did not love her or really care, only when I feel like a man. What I told you about sex is true. I couldn't bring myself to tell you about my male feelings. The reason I am writing this letter is because when I feel like a man then I can talk about it, that seems to be the only way. This is why it's so hard to decide what is best for me. When I feel like a man I want to be a man but when I feel like a woman I want to be a woman, but a real woman . . . I will have to close this letter because if I wait until morning I will not mail it, I might be feeling like a woman tomorrow.

H.W. demonstrates periodic changes of gender identity, in which he feels female most of the time with intermittent short periods in which he accepts his male status. In my experience this is a rare phenomenon (Lief, Dingman, and Bishop, 1962), and thus H.W. is atypical of male transsexualism, in which there is a clearcut and persistent identification with the female role from childhood onward. There are rare reports in the literature of gender role inversion being corrected by removing a feminizing tumor of the adrenal (Routier, Paget, Ernst, Longerson, Wiart, Dythost, and Cousin, 1964), or by temporal lobectomy in cases where there was an electroencephalographic abnormality (Hunter, Logue, and McMenemy, 1963; Hill, Pond, Mitchell, and Falconer, 1957).

H.W.'s fluctuating gender identity became even more fascinating when it was discovered in the course of his evaluation that he had a biological abnormality. His testes were one-quarter normal size and quite soft. Testicular biopsy revealed bilateral testicular atrophy with complete absence of spermatogenesis, and thus H.W. fulfills the histopathological criteria for Klinefelter's syndrome. His buccal smear was chromatin negative, or male, and chromosome count was 46/XY, so that chromosomally he is male. There are very few other cases of transsexualism associated with Klinefelter's syndrome reported (Money and Pollitt, 1964; Miller and Caplan, 1965; Davidson, 1966; Baker and Stoller, 1968a,b). Wålinder's review of the literature revealed 199 male and 42 female transvestites or transsexuals in which the sex chromatin or karyotype was examined, and 10 of the 199 males had a positive sex chromatin, whereas all of the 42 females were normal in this regard (Wålinder, 1967). There are several reports of Klinefelter's syndrome associated with homosexuality (Hemphill, Leitch, and Stuart, 1958; Money and Pollitt, 1964; Ferguson-Smith, 1958; Mosier, Scott, and Dingman, 1960; Roskamp, 1959; Hoaken, Clarke, and Breslin, 1964) and transvestism (Money and Pollitt, 1964; Walter and Bräutigam, 1958; Overzier, 1958a). Despite the rare coincidence of Klinefelter's syndrome and transsexualism, transvestism, and homosexuality, in no series did this reach statistical significance. On the contrary, there is now a large body

of information which demonstrates agreement between the genetic and anatomical variables in cases of transsexualism and transvestism (Barr and Hobbs, 1954; Bleuler and Wiedemann, 1956; Hampson and Hampson, 1961; Overzier, 1958b; Hoenig and Torr, 1964; Pauly, 1965; Wålinder, 1967). Numerous attempts to put forth an organic etiology for transsexualism have been made (Hamburger, Stürup, and Dahl-Iverson, 1953; Stoller, 1964b; Benjamin, 1966; Pauly, 1965; Editorial, 1966). The high percentage of electroencephalographic abnormalities (28 percent) found in transsexuals now suggests another possible organic determinant (Wålinder, 1967).[1] The relationship of the temporal lobe to gender orientation and sexuality has already been noted (Hunter, Logue, and McMenamy, 1963; Hill, Pond, Mitchell and Falconer, 1957; Davies and Morgenstern, 1960; Blumer and Walker, 1967). However, at the present time, the exact etiology of transsexualism must be considered unknown. Certainly the psychological and sociological factors involved with early learning and the child-parent relationship appear very significant in the process of gender identification. Whether these psychosocial determinants operate independently, or in conjunction with biological, as yet unproven determinants, is uncertain.

H.W. was treated with male hormones (Delatestryl®, 200 milligrams, intramuscularly, weekly for ten weeks). In view of his testicular insufficiency and his weak masculine identification, one can appreciate why the treating physician was inclined to prescribe this. The patient reported that this medication made him jumpy and nervous, unable to sleep, and rather depressed. He disliked the increase in beard growth and generally felt very unhappy about this treatment. It did not have an effect on altering his gender identification. This reaction is typical of what male transsexuals report when they are placed on male hormones. After his course of male hormones, H.W. was placed on estrogen therapy, and the results were subjectively quite the opposite. He experienced a sense of well-being and was very pleased with the decrease in hair growth, the onset of gynecomastia, and other somatic changes which ensued. Benjamin points out that estrogens are excellent tranquilizers for male transsexuals who report satisfaction in being treated with them (Benjamin, 1966). While this may be true, most transsexuals are not satisfied with hormone therapy alone, and continue to seek surgery. As a matter of fact, if they seem content with just the estrogen therapy one might question the diagnosis of transsexualism, as the true transsexual pushes in an aggressive manner for the limits of what is obtainable in sexual transformation.

H.W. comes from a minority ethnic background, in that he is of Mexican origin, born in the United States. Apparently, this syndrome

[1] However, also see Chapter 13 by Blumer in which this high percentage was not found in another series of transsexuals (Editors).

has no preference for any particular culture or socioeconomic group, but is known to exist in all levels of society (Wålinder, 1967). H.W.'s father was quite punitive, if not brutal. The fathers of transsexuals are frequently abusive or alcoholic (Wålinder, 1967), so that complaints are lodged against the family (16 percent) and the child is often placed in a foster home (27 percent). H.W. had a fairly low estimated IQ, but generally transsexuals do not differ from the general population in IQ distribution or mean (Wålinder, 1967).[2] H.W. is one of the few persons requesting a change-of-sex operation who thinks of himself as a homosexual. It is possible that this is a function of his lack of sophistication. Thus, he does not rationalize or even minimize his homosexual preference, despite the fact that he finds it painful to accept himself as homosexual, saying "I'm just a homosexual and I want to be something else." Like all transsexuals, H.W. prefers as a partner only a non-homosexual male who will accept him as female. His preference for anal intercourse is probably more typical of the homosexual than the transsexual although very little is reported in the literature about the preference for anal intercourse, either before or after sex reassignment. It is sometimes difficult to separate the gender and sexual motives of persons requesting sex reassignment. It may well be that H.W. is more correctly diagnosed as a pseudotranssexual homosexual than a true transsexual. For this reason, as well as the fluctuating nature or ambivalence of his gender identity, it would probably be unwise to recommend a conversion operation. Treatment might well proceed in the direction of a further attempt at helping him to accept homosexuality as less ego alien.

Case Report Number Four

K.M. is a twenty-seven-year old, single, Caucasian, biological male hair stylist who was initially seen in December, 1965. He sought psychiatric evaluation as a first step in obtaining "a conversion operation."

The patient is the second of three children, with a year-and-a-half older brother described by the patient as "a big, dull, clumsy ox who is powerful and masculine, and exactly the opposite of me." He describes his two years younger sister as very understanding, nice, and one with whom he has always enjoyed a very close relationship. The patient's mother reported that K.M. had been colicky for the first six months, with frequent stomach upsets, so that he had to go on "goat's milk." He played with his sister almost all the time, and began dressing in female clothes from at least the age of six. His father became very irate at this and apparently rejected the patient almost completely. As a result K.M. spent most of his time with his mother and sister and frequently helped in the house while the older brother helped the father outside the house.

[2] However, also see Chapter 11 by Doorbar in which strikingly high IQs were found in another series of transsexuals (Editors).

Apparently K.M. constantly demanded attention to the point where Mrs. M. often felt repelled but she overcame this feeling and attempted to give the child as much attention as she could. She reports that from as early as she could recall he was always rather girlish, that is, he would prefer to do the housework and play with dolls. At four years of age the boy was circumcised. He continued to wet the bed until the age of ten. Because he was fearful of the dark, he slept in his older brother's room. The two brothers never got along, as the older brother showed complete contempt for K.M. The mother admits that, because her firstborn was a son, she did want a girl as the second child and was disappointed when another boy was born. However, she denies rearing the child in the feminine role despite the fact that she was more permissive in this regard than her husband. The patient describes his father as "strictly masculine." Mr. M. kept his feelings in and did not get close to other people. He was described as a jack-of-all-trades, a perfectionist who wanted things done right. He was a manual laborer who stayed very close to his family when he wasn't working. The patient feels closer to his mother than to his father because of her permissive attitude, and describes her in favorable terms although he is quite aloof from his family, as he doubts their ability to understand his current situation. The only person with whom he has close communication is his younger sister.

Since childhood, and "for as long as I can remember," the patient always felt more comfortable in a female role and progressively in the last few years has become adamant that a change-of-sex operation is the only solution for him. From his early teens he has been attracted only to males and has been involved in overt homosexual relationships since about fifteen years of age. At about eighteen years of age he was introduced into a homosexual community in which he saw several transvestites. The sight of such a person only crystallized his feeling that this was "the only route for me to go." He has been cross-dressing intermittently since nineteen years of age and has accumulated a complete wardrobe of female clothes which "would put the average woman's wardrobe to shame." For approximately the last five years K.M. has lived with another man in a home which they bought together. Whereas initially this was an overt homosexual relationship, in the last three years there has been no sexual activity between the two. Their relationship has become very stable, which includes a certain amount of financial and emotional stability. For the last three years the patient has been actively seeking a physician who would perform the conversion operation. He makes it rather clear that the sexual reasons for requesting sex-reassignment surgery are not as important as the primary purpose, which is to become "as much like a woman, and be accepted as a woman, as I possibly can." The patient continues to work on a fairly regular basis as a hair stylist in a beauty salon.

On initial examination the patient presented as a tall, asthenic, and

effeminate appearing young man whose hair was long. His gestures were obviously effeminate and the intonation of his voice was definitely feminine. Although he was dressed in male attire he indicated that he paid no attention to his male clothes, whereas he was most meticulous when dressed as a female. At times he would smile rather inappropriately when discussing difficult and sensitive material. He presented his story in a fairly logical and coherent manner and there was no evidence of a psychotic thought disorder. Latency and duration of utterance were normal. He described his mood as having been generally depressed in the past. When his depression lasts for any length of time, he feels the need to dress up in feminine clothes which gives him considerable relief of tension and depression. At times, he feels buoyed up and somewhat on the high side, but this does not reach hypomanic proportions. In the last year he has been on female hormones, which improved his mood considerably. From time to time in the past he has had some sleep difficulty and generally his appetite is rather poor. He weighs approximately 130 pounds and is 6 feet 1 inch tall. Occasionally he has had some suicidal thoughts but he has rejected these and he has never made a suicidal attempt. He is definitely preoccupied with the wish to become as much like a woman as possible. Only the thought of a conversion operation makes living bearable for him. He hopes to "become a complete woman and eventually become a wife to someone and remain in the background." He specifically denies delusions or hallucinations. In the past he has been phobic for heights, darkness, and snakes. Memory and orientation are intact. He recalls seven digits forward and six in the reverse direction. He interpreted proverbs very well and distinguished between abstract words well; his IQ was estimated clinically as average.

On psychological evaluation K.M. had a full scale IQ of 116, placing him in the sixty-fifth percentile for those of his age. There was nothing particularly remarkable about his performance although the pattern of subtest scores suggested that his bright average ability has not been used to capacity. The subtest pattern is typical of scholastic underachievers and consistent with his description of his present activities. His MF scale on the Minnesota Multiphasic Personality Inventory was very elevated and typical of male transsexuals generally. Such men have been found to be sensitive, inner-directed, prone to worry, and to have highly aesthetic interests. The rest of the profile suggests that he is a conventional, compliant person who is not very socially active, has narrow interest, is self-centered, stable, and has strong home and family interests. Such men are found to be self-indulgent and emphasize oral pleasures. In general this is a profile which does not suggest marked emotional disturbance but rather stability, compliance, reasonableness, and persistence in working toward goals. The negative emotional factors are such things as introversion, insecurity in social situations, tendencies to worry, tension, irritability, and somatic complaints. His Rorschach

performance similarly does not suggest a psychotic disturbance, but rather poor interpersonal relationships, lack of empathetic understanding, hostility, self-dissatisfaction, and mild depression.

On physical examination the patient was a thin, asthenic male, who was within normal limits except for mild gynecomastia, probably secondary to estrogens which he has been taking for approximately one year.

To summarize: K.M. is not only characteristic of male transsexuals, but is considered an excellent candidate for sex-reassignment surgery. His mother confirms the life-long pattern of gender role reversal. She reports that cross-dressing began before age six, together with an interest in all the activities more usually associated with the female gender. She admits a preference for a female child, as well as a father who rejected K.M. Of significance is the older brother, who also rejected the patient. The younger sister and mother were very close to K.M. From childhood to the present there is the progressive and persistent identification with the female role. A preference for a male sexual partner is included in the picture, although overt sexuality appears to play a relatively minor role in K.M.'s life. Generally this is true of most male transsexuals, as previously discussed. This patient has found an occupation (hair stylist) which permits him to express his interest in feminine activities, and it is well known that this is an occupation common among effeminate men. K.M. finds the need to cross-dress periodically as a means of relieving tension and depression. This is by no means unusual and is reported in 20 percent of cases (Wålinder, 1967). Fifty percent of Wålinder's cases cross-dressed occasionally, whereas 43 percent cross-dressed consistently, and only 7 percent never dressed in the clothes of the opposite sex. Thus, K.M. is not unusual in that he has not yet attempted to pass completely into the female role. Some transsexuals never pass until after sex-reassignment surgery. The absence of psychosis, relative stability, absence of sociopathic features, normal IQ, and cooperative attitude make K.M. a good candidate for sex-reassignment surgery. Finally, the absence of exhibitionism and his wish to quietly "become a complete woman and eventually become a wife to someone and remain in the background" is reassuring.

Prevalence and Male–Female Ratio

In a previous report, I estimated the prevalence of male transsexualism at 1:100,000 of the general population (Pauly, 1968). Accordingly, there would be approximately 2000 male transsexuals in the United States alone. Within the last few years the Gender Identity Clinic of The Johns Hopkins Hospital has received applications from over 2,000 persons requesting a change-of-sex operation (Hoopes, Knorr, and Wolff, 1968). This clinic has been given considerable publicity and at one time was the only place in the United States where this operation was being performed openly. We can assume that the great majority of unoperated

transsexuals have applied or will apply there, although it should be stated that several hundred transsexuals have probably already obtained the operation, mostly abroad. Among the first 500 applicants, 79 percent were male, 21 percent female (Hoopes, Knorr, and Wolff, 1968). The figure corresponds very closely with the 4:1 male:female ratio as previously estimated (Pauly, 1965). The age for male transsexuals who applied at the Gender Identity Clinic ranged from fourteen to sixty-five years, with the modal age of 23–24 years. These data compare closely with Wålinder's (1967) series of thirty male transsexuals, where the range was eighteen to forty-nine years at the time the transsexuals were first seen, with a mean age of 27.2 years. These figures are to be compared with the age of male transsexuals when they first obtained sex-reassignment surgery, which ranged from nineteen to forty-four years, with the mean age being 32.2 years (Pauly, 1965). It should be stated that Wålinder, using a census method to estimate the prevalence of transsexualism in Sweden, calculated the prevalence to be 1:37,000 for male transsexualism and 1:103,000 for female transsexualism, or a ratio of 2.8:1. However, Wålinder calculated this with reference to the general population over the age of fifteen years, which partially accounts for his greater prevalence. However, I agree with his conclusions that transsexualism is undoubtedly more common than these figures suggest, for they are based on only those transsexuals who are under a stress sufficient to have them come to medical attention. Undoubtedly there are many who have not reached this point as yet, but the nature of the disorder is such that they will come to the physician requesting his help in obtaining sex reassignment. Whatever the exact prevalence may be, it is obvious that transsexualism is more common than heretofore appreciated.

Summary

Transsexualism is a dramatic and esoteric disorder of gender misidentification which assumes significance and importance in terms of what insight it gives us into the normal development of gender identification. At present, our understanding of why or how one assumes a masculine or feminine gender identification, whether consistent with or deviant from one's genital appearance, is quite limited. Certain intrafamily patterns begin to emerge which cast some light on the male child's preference for the feminine gender. This is of great practical significance when one considers the critical temporal aspects of this process and its apparent irreversible nature. Education and prevention become the focus, rather than treatment, for once the gender preference becomes established, it is doubtful that it can be changed.

Four cases of male transsexualism are presented, and the manifestations and case histories are compared with others from the literature. Cases one and four are thought to be good examples of true transsexualism, with the first patient having passed and been accepted by society as a member of the female sex, while the fourth patient

had not yet taken this step. Case three is not typical in that there is considerable fluctuation in gender identity despite an overriding and long-standing preference for the female role, and a desperate request for change of sex. In addition to the ambivalence of gender preference, there is a complicating biological consideration which is different from the normal biological variables described for most transsexuals. In case three, sex-reassignment surgery would be ill-advised in my opinion, whereas this procedure does seem indicated for patients one and four. The second patient has passed, but is still struggling to make an adjustment to life, despite the fact that the change-of-sex operation has already been obtained.

The syndrome of male transsexualism is characterized by a life-long preference for the feminine role, predicated on the conviction of belonging to the female sex. This conviction is held and persists despite the painfully obvious fact of normal male anatomy and genitalia, before and after puberty, and in the absence of delusional ideation or psychosis in the majority of transsexuals studied. The male transsexual is disgusted with the development of his primary and secondary sexual characteristics to the point where he frequently contemplates and occasionally performs self-mutilation of his genitalia. He prefers normal, heterosexual men as sexual partners, and rejects homosexual men or the idea that his sexual activity is homosexual. Feeling that he belongs to the female sex, he considers it appropriate to have a love relationship with a man, and he feels "unnatural" in a relationship with a woman, considering this "homosexual." There is some evidence that overt sexual activity, whether it be considered homosexual or heterosexual, plays a minor or secondary role. The male transsexual may decide to pass and become accepted as a female, either before or after sex-reassignment surgery, depending upon individual circumstances. In most cases, he becomes "she" to such a convincing degree that there is no question as to the individual's femaleness. Once the transsexual becomes aware of the possibility of the change-of-sex operation, he cannot rest until he obtains this cherished goal, and he frequently becomes depressed and suicidal while trying to find medical help.

The etiology of transsexualism is still uncertain, and thus the subject of considerable discussion and controversy. The prevalence of this disorder is greater than previously suspected and, as a minimal estimate, occurs in 1:100,000 of the general population.

At the present time one is impressed with the lack of success in attempting to alter gender identity, once established, by various forms of psychotherapy, somatic therapy, or behavior modification techniques. This fact, together with the apparent success of sex-reassignment surgery, compels one to accept the surgical treatment of transsexualism on an experimental basis, until the initial results can be verified or contradicted, or until alternative treatment modalities prove successful.

CHAPTER 4

ADULT MANIFESTATIONS OF FEMALE TRANSSEXUALISM

Ira B. Pauly, M.D.

INTRODUCTION

Although major attention has been given to the subject of male transsexualism, the female transsexual does, in fact, exist. One finds biologically normal females who from an early age prefer the male gender role and show a progressive, uninterrupted identification with the activities, interests, mannerisms, dress, and behavior which are considered masculine in their society. Whether normal or deviant, the process of gender identification takes place in males and females during a critical period in their development, and once established, it is irreversible in all but rare instances.

Westphal wrote of a young woman who demonstrated marked cross-gender behavior and preference for the male role (Westphal, 1870). Hirschfeld described a twenty-five-year-old woman who obtained bilateral mastectomy because of her desire to achieve a more masculine appearance (Hirschfeld, 1922), and to my knowledge was the first to report a case of female transsexualism. Cauldwell first used the term psychopathia transsexualis to describe a case of female transsexualism (Cauldwell, 1949), and Benjamin's significant contribution to this topic is responsible for the widespread use of the term transsexualism (Benjamin, 1953; Benjamin, 1966). Even today there are only a handful of detailed case reports of female transsexualism reported in English (Cauldwell, 1949; Redmount, 1953; Bowman and Engle, 1957; Hertz, Tillinger, and Westman, 1961; Don, 1963; McCully, 1963; Rubinstein, 1964; Stoller, 1965; Simon, 1967; Stoller, 1968). There are several excellent case reports in the European literature from as early as 1951 (Dukor, 1951; Battig, 1952), and these have been combined with the case reports in English for a review of over forty cases of female transsexualism (Pauly, 1963). Finally, there are several reviews of fairly large numbers of female transsexuals which examine the syndrome from a

statistical viewpoint (Hamburger, 1953; Randell, 1959; Pauly, 1963; Benjamin, 1966; Benjamin, 1967a; Wålinder, 1967; Hoopes, Knorr, and Wolff, 1968; Money and Brennan, 1968).

The prevalence of female transsexualism has been estimated at from 1:103,000 in Sweden (Wålinder, 1967) to 1:400,000 in the United States (Pauly, 1968). Female transsexualism is more prevalent than these estimates suggest, as both figures were determined by only those patients who made their requests known to the medical profession. Undoubtedly, there are many transsexuals who, for a variety of reasons, have not taken this step. Greater publicity has been given male cases of transsexualism, and it is well known that a widely circulated article regarding a transsexual's dramatic transformation is often the precipitating event which prompts other transsexuals to accelerate the search for their own transformation. By now, the public is well aware that a man can be transformed surgically into a woman. The reverse is not as well known, and accurately reflects the fact that, at the moment, there is less available in surgery for the morphologic female who wishes to be changed so as to approximate the male in genital structure and function. When this technically more difficult surgical procedure is perfected, and there is little doubt that it will be (see Chapter 23 by Hoopes), it will be interesting to see how many female transsexuals come forth requesting operations for the creation of a penis, in exchange for their hated breasts and uterus. On the other hand, it may be that transsexualism, like other forms of sexual variations, is actually more frequent in the male than in the female and thus is in keeping with Kinsey's hypothesis that the male is more prone to conditioning by psychological stimuli in the sexual and gender sphere than is the female (Kinsey, Pomeroy, Martin, and Gebhard, 1953).

This preponderance of males over females is somewhat surprising when one considers that it is more common in our culture for young girls to report a preference for the male role than the reverse (Brown, 1957; Brown, 1960; Hampson and Hampson, 1961). In spite of a more permissive attitude toward cross-gender behavior in little girls, most of the tomboys seem to have outgrown their masculine preferences as adults. On the other hand, effeminate boys are ridiculed by their peers and admonished by their parents but, despite this negative social reinforcement, they tend to have more serious problems of gender identification as adults than do their female counterparts. Even on a theoretical basis, some writers feel that female homosexuality ought to be more prevalent, as the girl's first intense relationship is, in fact, a "homosexual" one (Horney, 1966), whereas the male's first object relationship is "heterosexual." The female must give up her attachment to mother and subsequently develop a heterosexual orientation through interaction with her father, and thus the process is more complex, with greater chance for error.

Reports of the male:female ratio in transsexualism have varied from

8:1 (Benjamin, 1966) to 2:1 (Randell, 1959) with other authors having reported ratios somewhere in between (Hamburger, 1953; Pauly, 1965; Wålinder, 1967; Hoopes, Knorr, and Wolff, 1968). The two largest series show close agreement as to the age at which female transsexuals seek medical attention: fifteen to forty-four years (mean of 25 years) for the first seventy-eight females who applied to the Gender Identity Clinic at The Johns Hopkins Hospital (Hoopes, Knorr, and Wolff, 1968) compared with a range of fifteen to fifty years (mean of 25 years) for the one hundred and eight females who requested a change of sex from the physician who reported the Christine Jorgensen case (Hamburger, 1965). Wålinder, reporting on thirteen female transsexuals, records a range of eighteen to forty-five years (mean of 28.6 years) at the time when he first saw them, but a somewhat earlier age range, thirteen to thirty-eight years (mean of 22.5 years) at the point when they first consulted a physician (Wålinder, 1967). Other reports show similar age ranges (Randell, 1959; and Pauly, 1963). The age at which they seek medical attention is indicative of the increasing frustration and inability to tolerate their condition. For female transsexuals, it is often associated with a developing love relationship with a woman, which they hope to legalize (Hamburger, 1953; Randell, 1959). This factor seems to be a less dominant motivation for male transsexuals.

Whereas there may actually be a smaller incidence of gender and sexual deviance in the female, this does not explain the relative paucity of work published on the normal process of female psychosexual and gender identification. Freud was aware of this one-sidedness in psychoanalytic theory, and late in his career attempted to equalize this emphasis on male psychosexual development by writing on female sexuality (Freud, 1931). However, it required a female psychoanalyst to point out that psychoanalysis is the creation of men, and almost all who helped develop these ideas have been men. "It is only right and reasonable that they should evolve more easily a masculine psychology and understand more of the development of men than of women" (Horney, 1966). It follows, then, that most of the contributions towards an understanding of female psychology and psychosexual development have been made by females (Brunswick, 1940; Deutsch, 1944; Greenacre, 1950; Horney, 1966).

With this introduction, we will turn to specific examples of gender mis-identification in morphologically and hormonally normal females. As in the case of the male, we are dealing with a continuum of gradations in behavior, and we are concerned with the extreme end of this continuum when considering the biological female who passes as a man (Stoller, 1965).

Case Report Number One

E.R. is a twenty-seven-year-old biologically normal female who requested help from the medical school in a letter, part of which read:

. . . It seems to me that I have spent almost twenty-six years of hell trying to be the girl everyone thought me to be (and biologically I am). I finally decided that it was easier for me to live as I liked than to live as everyone else liked. I am very happy with living this way but of course not completely because I am still biologically female. To complicate matters I recently began dating a girl I like very much. When I graduate I think I would like to marry her, which is of course impossible for me now. I seem to be caught between the hope that someone will treat me and let me live my life happily and the fear that no one is really willing to accept such an awesome responsibility. At any rate I would be anxious to talk to someone in Psychiatry about my problem if for no other reason than to probe into problems of people like myself who have lived in this heinous predicament all their lives. Your help would be appreciated.

The patient gave the following past history: She is the oldest of four daughters, born in a rural community and raised partly in a farm setting. She described her father as a "large and aggressive man" who worked as a logger, was a chronic alcoholic, and was often very frightening when drunk. The father was the last of eight siblings, all of whom were deceased except one older brother, and there were no male offspring to carry on the family name. In an interview with the father he denied that he wanted a son "anymore than the next guy." However, his wife and second daughter, in addition to E.R., claim that he wanted a son very much indeed. With the birth of each successive child, four, ten, and twelve years after the birth of E.R., the father expressed hope for a boy preceding each delivery, which was followed by disappointment and a drinking spree. The patient recalls feeling that she wished from age three on she were a boy. She was encouraged to be her father's son much of the time, with his apparent approval of her tomboyish ways, although intermittently she would be forced into the role of a little girl. Apparently, Mr. R. had rather set notions of what activities little boys could observe and participate in around the farm, and which were forbidden the female sex. E.R. cherished those times when her father allowed her to ride the tractor with him and sit on the "cat" to help clear the brush. However, the father was a very hard working man and left the home early, before the children were awake, and often did not return until the children were in bed. Thus, when father was at home, as on the weekends, his presence was cherished and the entire family hovered around him. It was obvious that he was the center of attention in the family. E.R. identified with her father. Frequently the two of them argued violently, and, as the sister remarked, they both had the same temper and stubborn personality. While E.R. developed a kind of competitive relationship with her father, she had very warm and protective feelings toward her mother. Because her husband was away much of the time and was a chronic drinker besides, most of the decisions were made by Mrs. R. It is clear that Mrs. R. was domineering and aggressive in many ways, so that she may have preferred or even fostered this arrangement.

When the patient was seventeen and a senior in high school, Mrs. R. was forty-two and had the first of her four psychotic episodes characterized by paranoid delusions and manic-depressive symptoms. E.R. and her sister indicate that their mother was always somewhat difficult to deal with and very concerned with "what the neighbors might think." There were frequent quarrels between the parents, and E.R. was aware that her mother was physically abused on more than one occasion. Later, Mrs. R. reported, her daughter encouraged her to leave her husband, implying that E.R. would take care of her. The patient still recalls wanting to fight her father at those times when he was abusive toward her mother. Being the oldest, E.R. would often act as the head of the family, especially because the father was away so much of the time. Each daughter was somewhat tomboyish, wore jeans, and worked on the farm. All became fond of horses, and as the next younger sister explained, "all of us gave up our interest in horses and became interested in boys instead, except E.R."

E.R. led a double life: at school she dressed as a girl and at home she dressed and played as a boy. By the seventh grade, her parents began to object to her masculine behavior and insisted that she become more feminine. Bitter arguments and fights ensued with her mother who would insist that the patient attend some social function in a new dress or would brush the patient's hair and fix it in some feminine fashion. The patient claimed that from the ages of eight through twelve, she was almost completely by herself because she wouldn't accept the feminine role and was in constant turmoil with her family and could confide in no one. At the age of thirteen she had her first menstrual period, a most unhappy experience which she still recalls with sadness. She simply would not accept that menarche had occurred and refused to report this to her mother. Menses continued on a regular basis and lasted three days with occasional cramps. She became excessively masculine and aggressive and remarked, "I could clean anyone on the block."

At thirteen or fourteen she became aware of sexual feelings toward the girl next door and when she finally expressed her feeling she was laughed at and rejected. She recognized she was very different from most girls and she claims that at no time was she ever attracted sexually toward boys. During high school, she had a boyfriend who lived at some distance, and this arrangement provided a convenient excuse to avoid dating and the social role of a female. When she went away to college, she was forced to assume a female role. In the first two years she began dating and complained that she had frequent offers to go out. She fell in with a rowdy group who used alcohol and drugs. E.R. found that alcohol made it possible for her to accept the female role more readily, but without it she was very tense and frustrated. In her second year of college she began a relationship with a young girl toward whom she developed a strong sexual attraction. This relationship continued for the next eight years to the present time.

However, prior to having any overt homosexual relationship, she had one heterosexual experience when she was nineteen. She was frustrated and felt very guilty about her homosexual feelings and thought it would be more normal to have a sexual relationship with a man. She had sexual intercourse on six occasions over a two-month period, and remarked of her reaction to this experience, "hurrah, I'm normal, I've done it, I've had an affair." The patient claims that she had no sexual gratification, and was not aroused or stimulated. Her mother and sister claim that E.R. was very disappointed and hurt when this relationship did not continue. The patient, however, minimizes her interest in this man, who was the only male sexual partner she has ever had.

From the age of twenty, the patient has had overt homosexual relations with the above-mentioned friend, in which the patient refrained from being touched in the genital area by her partner. When this couple was observed kissing, E.R. was called before the Dean of Women and referred to the school psychologist for treatment under the threat of dismissal. She claims that she tried very hard for six months to accept her female role. She threw away all her masculine clothes and tried her best to cooperate with her therapist. Her therapist reported that "she had identified with her father, and saw her mother as weak." However, E.R. was unable to continue in therapy for longer than six months, and since the age of twenty-two she has never attempted to accept a female role but has become progressively more masculine in her appearance and behavior. She cross-dressed as often as she could and avoided any situation which would force her into the female role. Also since the age of twenty-two she has looked forward to the day when she could obtain an operation to change her sex.

At the age of twenty-six, E.R. moved to a larger city and from then on completely passed as a man. He (I will use the masculine pronoun now) changed his name and identification and was accepted in graduate school as a male. He is much happier in the last year than he has ever been before. Sleep and appetite have improved during this time. He made a trip last winter to Baltimore to contact the staff in the Gender Identity Clinic at The Johns Hopkins Hospital. He was disappointed to find that help was not forthcoming in the immediate future. At this point, he was at a low ebb and briefly contemplated suicide, but has responded very favorably to the psychiatric evaluation, for he has been able to explain himself for the first time to someone willing to accept him on his own terms. E.R. has been encouraged to invite his parents to visit so that the situation could be discussed openly for the first time within the family.

Psychiatric and psychological evaluation revealed a male-appearing individual, 5 feet, 8 inches tall, weighing about 123 pounds. The patient smoked a pipe and used a toothpick in a rather masculine manner. Affect was full and appropriate, and E.R. passed as a rather asthenic

young man, looking five to ten years younger than his actual age of twenty-seven. His voice was slightly higher in pitch than one would expect of a male, but not such that one would question that he was a man. In neither the mental status examination, nor the psychological tests (WAIS, MMPI, Draw a Person, Rotter Sentence Completions, and the Who am I? tests) was there any indication of psychosis. E.R. earned a total IQ of 125, placing him in the ninety-fifth percentile for this age. On the MMPI the profile peaked at four, suggesting a passive-aggressive or emotionally unstable personality. Such persons are often described as irresponsible, immature, demanding, egocentric, and impulsive; perverse sexual behavior, suicide attempts, aggressive outbursts toward families, and alcoholism are frequent among them. Despite E.R.'s masculine interests, the profile is not excessively masculine because he is sensitive, empathetic, and interested in artistic and intellectual pursuits. He clearly deprecates femininity stating that "most women aren't expected to think, but many do." He hopes to marry—"I would like to marry and have lots of animals and children." E.R. reports an improvement in mood in the last year, since he began passing completely as a man. His sleep and appetite have also improved in this period, although E.R. had an episode of suicidal ideation last winter when faced with the prospect of being unable to obtain medical help. There are no delusions, hallucinations, or paranoid ideations and no evidence of organic psychopathology.

During the course of the evaluation, E.R.'s girlfriend accidentally discovered that E.R. was a female. After four months of rather intimate contact, this nineteen-year-old girl had no idea that her date was not a male. It was interesting to find that this girl had wanted to become a nun because she had very strong religious feelings. She felt comfortable with E.R. because he had never made any passes, nor attempted to have a sexual relationship. This young girl had her hair cut short, wore no make-up, and gave the impression of an asexual fourteen-year-old; she denied any homosexual feelings but did acknowledge being sexually aroused during prolonged kissing with a boy. It is worth noting that this young girl, who apparently had some questions regarding her own femininity and some concern about sexuality, should have become involved with a transsexual.

On physical examination, E.R. was a normal female, with normal breasts and genitalia. However, there was a noticeable crease around the chest, where an elastic bandage had been used to flatten out the breasts. Hormonal evaluation revealed a 12.8 milligrams per twenty-four hours 17-ketosteroid level which is well within the normal range (6–15) for a female. Chromosomal evaluation was unremarkable. E.R. is genetically and phenotypically female. E.R. has recently undergone bilateral mastectomy and complete hysterectomy (June, 1968), after nine months of androgen therapy (Depo®-Testosterone 200 mgm. I. M.

every two weeks). He is very pleased with the result of surgery and hormone therapy and is seriously considering plastic surgery for the creation of a penis.

E.R. was a first-born child. However, birth rank has not been found to be related to transsexualism (Wålinder, 1967). The father was described as large, aggressive, and masculine, in addition to which he drank excessively. This description corresponds to that of the fathers of the first three cases of female transsexualism reported here. Alcoholism has been found to be significantly greater in the fathers of transsexuals than in the fathers of a control group (Wålinder, 1967). Mr. R. apparently had a great need for a son to carry on the family name which was threatened with extinction, and seemed to have given E.R. some encouragement in identifying with the male role. With the birth of each successive child, E.R. became more aware of her father's wish for a son, and his subsequent disappointment. The father's infrequent presence at home resulted in his receiving considerable attention when he was home. Despite his drunkenness and abusiveness, E.R. clearly identified with him in preference to her mother. A serious disruption in the mother-daughter relationship often prevents the little girl from identifying with her mother (Brunswick, 1940; Barahal, 1953; Brown, 1957). It is difficult to say to what degree this occurred in E.R.'s relationship with her mother, but it is known that Mrs. R. had a serious psychiatric illness with paranoid features. Mother was seen as weak and in need of protection from father, so that E.R. functioned as the head of the household, was competitive with father, and wished to replace him. These dynamics, referred to as the reverse Oedipal or Electra Complex, are not uncommon in psychoanalytic literature (Barahal, 1953; Rubinstein, 1964).

According to Wålinder, E.R. is quite typical of female transsexuals who, before puberty, acted like and played the games of boys (92 percent); played mostly with boys (92 percent); were embarrassed by undressing in front of other girls (46 percent); cross-dressed occasionally (23 percent) or consistently (46 percent); and felt as though they belonged to the opposite gender (100 percent). All thirteen of the female transsexuals in Wålinder's series felt their cross-gender preference began before age five and this was confirmed by outside sources. After puberty, female transsexuals cross-dressed significantly more consistently than did their male counterparts (92 percent); were disgusted by all signs of their anatomic sex (100 percent); wanted to be accepted by society as males (100 percent); wanted a surgical change of sex (100 percent); and still felt as though they belonged to the male sex (100 percent). Specifically, E.R. resented the onset of menstruation, as well as the development of female secondary sex characteristics. Binding of her breasts is quite characteristic, as seen in my cases two and three as well. E.R. became depressed intermittently, as do 69 percent of female

transsexuals. However, they entertain suicidal thoughts (23 percent) or make attempts at suicide (8 percent) less frequently than male transsexuals (60 percent and 20 percent, respectively) (Wålinder, 1967).

Female transsexuals seem somewhat better adjusted with less psychopathology. "The men seemed more emotionally concerned about their situation than the women: they were more envious of women than the female patients were of men, and they were more persistent in their efforts to undergo a change of sex. . . . The women more often planned their future a long way ahead, they seemed to suffer less from their situation, they were more determined to solve their problems as best they could, and they succeeded better in coming to terms with life" (Wålinder, 1967). Female transsexuals are freer of paranoid trends and feelings of persecution. Male transsexuals are significantly more asthenic, hysteroid, and psychoinfantile in their personality characteristics than the females (Wålinder, 1967). As commented upon in the previous chapter, female transsexuals appear to accept the male role more naturally without any tendency to exaggerate the part and portray a caricature of a hypermasculine role (Wålinder, 1967; Stoller, 1968). This clinical observation is validated by several different psychological tests which indicated that male transsexuals were more feminine than normal women, whereas this was not true of the females. Both groups showed the reverse relationship in their scores on verbal and nonverbal tests of masculinity-femininity to that of normal men and women (Wålinder, 1967).

E.R. was not psychotic, nor are most transsexuals, although this has been challenged by some and will be discussed later. E.R.'s attempt at therapy aimed at correcting her masculine identification was unsuccessful, as is invariably the case. E.R.'s biological evaluation was normal, including genetic and hormonal evaluations. This patient had a single heterosexual experience which was unsuccessful. Occasionally the female transsexual will marry in hopes of submerging her problem, but this is rarely successful (Randell, 1959; Wålinder, 1967). Even pregnancy and childbirth do not alter her feelings of belonging to the male sex. It is usually the case that female transsexuals who have "passed" are able to deceive their female partners as to their true identity, as will be illustrated in the next case.

Case Report Number Two

In the summer of 1966, C.K. had a violent argument with his wife who felt he was paying too much attention to another woman. The wife became angry and hurled a rock through the windshield of a friend's car. C.K., in turn, slapped his wife, and she pressed charges and had her husband incarcerated for assault and battery. During the booking, a shower was required, and it became apparent that C.K. was female. He had a false penis in his pants, made of a sock stuffed with paper.

The patient insisted that he was male, but he desired medicine or an operation to make him appear anatomically more like a man. He stated that he seriously considered killing himself because he does not want to go on as he is. The patient had never previously been in trouble with the law, nor did he acknowledge other emotional or personality problems. After consultation with the local court psychiatrist, he was referred to the medical school for psychiatric and chomosomal evaluations. The referring psychiatrist's statement is pertinent: "I have rarely seen anyone so confirmed in feeling as a person of the opposite sex."

C.K. is the third of eight children born to a Mexican-American family in a big Western city. As far back as she can recall, she acted, dressed, and thought as a boy. She was given dresses, but refused to wear them. She always played with her brothers and rarely with her sisters. She attended school through the fourth grade, dressed as a boy, and was accepted by her peers as such. The father, approximately age sixty, worked in a restaurant and drank excessively. Not infrequently, he would return home late at night and was abusive to his wife and oldest daughter. It was very painful for C.K. to observe this fighting and she felt particularly guilty when the parents argued about her not acting as a girl. She loved her mother and felt frustrated that she could not help her. By age ten, her parents became increasingly concerned about their daughter's refusal to assume a more feminine role and they insisted that she wear dresses and behave as a female. This caused considerable friction in the family, which ultimately resulted in C.K.'s running away at the age of thirteen, never to return.

For over ten years, C.K. has passed undetected as a male. Even though only thirteen years of age, he obtained employment in male occupations such as carrying bricks, working the harvest, or washing dishes. Later, he enjoyed going to dances on the weekends and had several girlfriends. Never has he been attracted to men, and he denied masturbation. He has never returned home to see his parents, nor has he written them. At the age of twenty-one (three years prior to his evaluation), C.K. met a young Mexican girl and after a brief courtship they were married. He never undressed in front of his wife and never permitted her to see or touch his genitals. As concerns any lovemaking, he said he kissed her and held her close, but when she would ask about his "doing anything" he would plead illness. When asked if he had ever attempted to stimulate his wife by digital manipulation, he became upset and said that he had heard that this was against the law and had never done so. It was very difficult to keep his secret from his wife and he took special pains to keep his shorts closed and always wore a T-shirt to bed. He kept his breasts strapped down so that they would not show. When asked about his artificial penis, he seemed quite embarrassed, but said, "I'm a man, I need one, and I didn't have one. That thing made me feel like a man." He reported that he would have menstrual periods

infrequently, perhaps four or five times a year, during which he would only spot for a few hours. Thus, he had been able to conceal from his wife for three years of marriage the fact that he was female. Finally, however, his wife had become more and more intent on having sexual relations, particularly because she wanted to have children.

During the interview with the patient's wife, she confirmed the story presented by her husband. She was a twenty-three-year-old female of Mexican-American extraction. She had more difficulty in speaking English than C.K. Her parents were alive and living in Texas. She was the fourth of eight children and had a third-grade education. She described the marriage as stormy and said that, after they were married for one year, they separated for six months, then came back together, separated again, and had been back together for five months at the time that C.K. was put in jail. She reported that her husband would simply caress her when she asked him to make love and then he would say he was sick and could not make love to her. She admitted that during their first separation she had an extramarital affair, and that she had had premarital sexual relations, so that she knew what to expect sexually. She denied any homosexual feelings or thoughts, much less overt experiences. On the contrary, she had enjoyed heterosexual activities. She was attracted to C.K. initially and had no suspicion that he was anything but what he appeared—a young man. She met him at a dance, and considered him as kind, gentle, and somewhat happy-go-lucky. After their marriage, she became increasingly suspicious that something was the matter, when he was not able to perform sexually. Several times she tried to get him drunk so she could take his clothes off and see him nude. She never succeeded in this. Although she wanted to know the truth, she was also fearful of having her suspicions confirmed because of the shame and humiliation she would suffer. She anticipated ridicule from others if they were to discover that she had made such a poor choice in a mate. These dynamics, together with her low-average intelligence and extremely naive outlook, allowed the deception to continue to the present time. When she was told by the police authorities of her husband's sex, she was not surprised, but was actually glad to finally know the truth. She did not wish to continue the relationship, but she was concerned about C.K. and the problems that she had stirred up. She was bewildered at the turn of events which her complaint against her husband had produced. Certainly she did not want him to stay in jail and was relieved when told that he was being sent to the psychiatric ward for evaluation and treatment. Although she was somewhat depressed, this was not of major proportions, and there was no evidence of a thought disorder.

Returning to C.K.: The psychiatric and psychological evaluation revealed a short (5 feet, 1½ inches) and slight (approximately one hundred pounds), adolescent-appearing Mexican boy. He had short dark

hair, smooth skin, and masculine mannerisms and gestures. He was quiet and shy, although friendly and cooperative. He had a Spanish accent, his English was fairly good for simple words, but he readily admitted that he could not understand anything but the most simple sentences. There was no thought disorder, nor was there a history of delusions other than his gender identification (if this can be considered delusional) or hallucinations. Nothing on the psychiatric or psychological examinations (which included the WAIS, Wide Range Achievement Test, the Raven Progressive Matrices, the MMPI, and the Who Am I? test) suggested psychosis. His general fund of information was quite limited, the full scale IQ on the WAIS being 64.[1] This score is in the upper "mental defective" range, or in the second percentile of the population for people in his age group. He performed somewhat better on the nonverbal tests, as reflected in a performance IQ of 70, compared with verbal IQ of 63. The language problem undoubtedly accounts for some of this discrepancy. The reading and spelling skills are at the second-grade level.

Although the IQ score is quite low, it is important to recognize that C.K. not only has been independent since the age of thirteen, but also has supported a wife for three years and functioned responsibly in society without incurring debts or requiring assistance. This fact is testimony to the strength of the patient's conviction that he is a man, and that "it's a man's job to provide a home and work like a man for his wife." The MF Scale on the MMPI indicates primarily masculine interests and orientation. He expresses his concern over continuing to meet the responsibility of the masculine role and is completely bewildered and opposed to any suggestion of changing to the feminine gender.

Since it has become known recently that he is female, C.K. is concerned about people's opinions of him. He is worried that people at home will stare at him and think he is crazy. There is no evidence for organic psychopathology. Recent and remote memory are good, and he recalls seven digits forward and five in the reverse direction. He has some insight, in that he knows that his problem is feeling that he is a boy trapped in a girl's body. However, he is most naive in the area of genital sexuality, intercourse, pregnancy, and what is possible for him medically or surgically in the direction of sex reassignment. When he was first admitted, C.K. thought it was possible to have an operation which would enable him to function sexually as a man and to impregnate his wife. After it was explained that this was impossible, he insisted on "getting rid of my breasts" and acquiring a penis. His false penis had

[1] Among barely literate, socially deprived, American ethnic minorities, it is often necessary to add fifteen or twenty points to the tested IQ in order to make it congruous with actual achievement in life. This low IQ may well be factitious (Editors).

almost become a reality to him, despite the fact that he had no idea of what an erection or ejaculation was. Psychologically, it had become a part of him and the loss of it created depression much as it might in any male who had suffered the loss of his natural sexual organ.

On physical examination, the patient was a slight, young Mexican female, with no physical male characteristics. There were no physical abnormalities. The breasts were small and somewhat creased and pigmented by a band that the patient wore about the chest to compress the breasts. There was no beard and very limited hair on the arms and chest. There was a normal female escutcheon, as well as normal female genitalia, including an intact hymenal ring. The clitoris was not enlarged. Laboratory tests were within normal limits, except for a 17-ketosteroid value of 18.6 milligrams per twenty-four hours, the normal female range being 6–15. A buccal smear for sex chromatin was positive and thus consistent with the impression of a phenotypic and genetic female.

After a twenty-eight day period of evaluation, it was decided to help C.K. by recommending testosterone therapy and bilateral mastectomy. Depo®-testosterone was started, 100 milligrams every two weeks. As it became apparent that his marriage was breaking up, C.K. found it very painful to acknowledge it and see his wife go out with other men; however, after a few weeks he seemed to have accepted the termination of his marriage. Arrangements were made for his discharge from the psychiatric ward, to be admitted to the surgical service after a few weeks of testosterone therapy.

When C.K. was readmitted, almost two months later, to the surgical service for bilateral mastectomy, he was eager for the operation. However, there were strong feelings evoked in a number of surgical consultants who saw the patient. In the controversy which ensued, a number of dissenting opinions were voiced, despite the endorsement of the department of psychiatry to recommend this procedure on psychiatric grounds, after a thorough and extensive study of the patient. The administration was reticent to give permission for this type of operation for two reasons. If the patient should one day decide that he wanted to become female again, the hospital might be held responsible, with the possibility of legal complications. And, secondly, if this operation were to be publicized, the hospital might become a drawing point for others wanting this type of operation. Thus, the patient was discharged without having obtained the operation. C.K. was understandably disappointed.

The reactions of the administration and of the physicians involved are quite typical of what one encounters throughout the country in response to the request for change of sex in the transsexual patient. However, if a patient has the least anatomical abnormality, so that the indications for sex-reassignment surgery are physical rather than psychogenic, there is usually no problem whatsoever in the patient's obtaining such a

procedure. It is as though the physical determinants of gender identification are the only real ones, and the emotional, psychosocial determinants are to be completely discounted when the justification for a change-of-sex operation is considered. Whereas psychosocial determinants are operating to cause the problem, many physicians are unable to accept the psychiatric indications for sex-reassignment surgery. The reader is referred to those articles which deal with the attitudes of physicians and hospital administrators toward this problem (Green, Stoller, and MacAndrew, 1966; Pauly, 1968; Chapter 15 by Green).

Female transsexuals have been primarily involved with overt homosexual behavior, in 61 percent of the cases, compared with 53 percent overt homosexual involvement in the male transsexuals (Wålinder, 1967). Only 8 percent of the female transsexuals reported chiefly overt heterosexual experience (compared with 20 percent for the males), although all female transsexuals are excited by other females in their thoughts and fantasies (compared with 93 percent for the males). When the female transsexuals were classified according to the strength of their sexual urge, none was thought to have a strong sexual urge (compared with 17 percent of the male transsexuals), whereas 77 percent were thought to have a moderate sexual urge (compared to 63 percent of the male transsexuals). In 38 percent of the females and 16 percent of the males, there was the combination of a weak libido together with never having masturbated or never having had any form of genital activity (Wålinder, 1967). Our data show that female transsexuals are slightly more homosexual in their sexual object preference, but somewhat less active in their sexual drive than their male counterparts. It is clear that a large percentage of transsexuals have a weak sexual drive and/or little or no sexual activity. These figures support the viewpoint that this syndrome can be interpreted as an escape from genital sexuality (Pauly, 1965).

All female transsexuals are mentally excited by and attracted to females for sexual partners. Some have occasional sexual experiences with men, but very few continue a heterosexual relationship. Stoller doubts there is such a condition as female transvestism, wherein the female wishes to continue her feminine identity, but periodically wishes to wear men's clothing because of its erotic value (Stoller, 1968). Transsexuals, whether male or female, are not stimulated sexually when they cross-dress, although they feel more natural and comfortable. As already noted, female transsexuals cross-dress from an earlier age and do so more consistently than do their male counterparts. For the female, there seems to be an all-or-none phenomenon, whereas there are more gradations of cross-gender behavior in the biological male. Hamburger found no heterosexual female transsexuals whereas 22 percent of male transsexuals were actively heterosexual (Hamburger, 1953). Two exceptions to this include female transsexuals who have

developed on-going relationships with men who themselves are transvestites (Bowman and Engle, 1957; Randell, 1959). Technically this may be considered a heterosexual relationship, but it is evident that these female transsexuals think of themselves as men and both partners are in role reversal. The satisfactory relationship reported by one of these patients (Bowman and Engle, 1957) caused me to consider the feasibility of introducing C.K. to H.W. (case three in the previous chapter). Both are from similar backgrounds, of Mexican extraction, of nearly equal IQs, and physically well matched. Although seriously tempted to recommend such a match as a potential solution for both patients, on further consideration I decided against such direct intervention.

As mentioned in the previous chapter, this syndrome occurs in all cultures, ethnic groups, and socioeconomic levels (Randell, 1959; Wålinder, 1967). Two of the eight patients reported here are Mexican, and 11 percent of the first 500 applicants to the Gender Identity Clinic at The Johns Hopkins Hospital were Negro (Hoopes, 1967). C.K.'s IQ was quite low, in contrast to high IQs of the other female transsexuals reported here. Female transsexuals did not differ from the general population in IQ distribution or mean in the study by Wålinder (1967).

Numerous biological explanations for the etiology of transsexualism have been suggested (see previous chapter), but these have not been substantiated. The biological variables which can be measured appear to be within normal limits in the vast majority of cases (Randell, 1959; Pauly, 1963; Schultz, 1963; Wålinder, 1967). Wålinder (1967) reviewed the literature and found forty-two cases of female transvestism and/or transsexualism who were examined for sex chromatin or karyotype and were found to be normal. Endocrinologically, the same is true, including normal 17-ketosteroid values, although the range for the male and female has considerable overlap and there are technical difficulties with hormonal analysis (Randell, 1959; Pauly, 1963; Wålinder, 1967). Not infrequently, the female transsexual will minimize the frequency and duration of menstruation, will appear very masculine and demonstrate underdeveloped breasts and masculine type pubic hair pattern (Pauly, 1963; Benjamin, 1967; Wålinder, 1967).

This does not constitute serious grounds for an endocrinologic explanation. However, C.K. had a single 17-ketosteroid determination which was clearly above the female range, despite the fact that she showed no physical evidence of hyperandrogenism. One case has been reported in which female transsexualism was associated with hyperandrogenic ketosteroid levels, including android morphology, hypertrichosis of the male type, amenorrhea, and enlargement of the clitoris (Sandrail and Gleizes, 1961). However, the source of the androgen can be exogenous as well as endogenous, and this would not be the first instance in which male or female transsexuals would have attempted to

conceal the fact that they had taken contrary sex hormones (Pauly, 1963; Pauly, 1965; Stoller, 1968). These rare exceptions to the normal endocrinological status of female transsexuals become quite fascinating when considered in the light of recent animal experiments which demonstrate the effect of androgens on the central nervous system at a critical point in prenatal development (Phoenix, Goy, and Young, 1967; Levine, 1966). Apparently, the female pseudohermaphroditic young of rhesus monkey mothers treated with androgens during pregnancy develop cross-gender behavior. The presence of androgens at a critical time appears quite important in the gender behavior subsequently developed. It should be emphasized that the effect of these hormones depends on a critical time period during which they are present very early in the individual's development, so that normal androgen levels later in life when most transsexuals are evaluated, do not rule out the possibility of such an explanation. At the moment, however, we can simply state that the vast majority of female transsexuals are within normal biological limits at the point when they are evaluated in early adulthood.

Case Report Number Three

I saw D.L. first when he was thirty-two years of age. He had been admitted to the urology service of a university hospital on the east coast. At the time when I responded to the request for psychiatric evaluation, I had never seen or heard of a case of male or female transsexualism. The following report was written six years ago and is included to demonstrate the change in attitude toward such patients which has evolved over this period. In the original report, D.L. was referred to in the feminine gender. However, in order to remain consistent with the previous case reports, I have changed the original description only in the use of the masculine pronoun from the point in the patient's history when he passed into and was accepted in the male role (age twenty-four). The patient requested an exploratory laparotomy to determine the presence of male gonads, which would confirm his impression that he was a male pseudohermaphrodite. The admitting physical examination revealed a male-appearing individual with female genitalia, including an enlarged clitoris. His flat chest was explained on the basis of having undergone bilateral simple mastectomy.

The patient was the second of two children, born in the 1920s to a middle-class Irish-Catholic family in a large city in the East. At birth she was thought to be a normal female, and there were no known congenital abnormalities. Growth and development were normal physically, but the patient said she had felt something was wrong as far back as she could remember. By age four or five, she preferred all male activities, rejecting feminine toys and interests. During the latency period she described herself as a typical tomboy, feeling best when she could dress

and act as a boy. Because of this increasing tendency, she had conflict with her family, who insisted that she assume a more feminine role. She remembered her father as a large man, a steel worker, who was very strong, and had a severe temper. On one occasion, the patient recalled that he struck her on the head with sufficient force to rupture her ear drum. Her mother was an affectionate woman, of average intelligence, to whom the patient was never close. On the other hand, her sister, two years older, was very close to the mother, and the patient remarked that she never shared the interests of her mother and sister. She frequently fought with her sister, enjoyed abusing her, and annoying her sister's friends. As time passed, she became increasingly convinced that she was not a female. Because of her persistence with this idea, her family consulted a physician and the patient claimed that the examination revealed "something abnormal about my genitalia." The mother died when the patient was nine years of age. After this, she attended boarding school but complained that this forced her into an undesired feminine role. She reported that she withdrew from female companions and indicated she considered herself too rough for them. Yet, she felt ridiculed by the boys, and rejected by them as well.

Menarche occurred at the age of fourteen. Menstruation was scant and irregular initially. This event only increased her anxiety and sense of frustration as to her sexual status. The patient performed well in school, but her social adjustment was poor. She graduated from high school at sixteen and left home to work as a stable boy. In this job she was able to dress as a boy, and at the same time remain aloof from people. She drifted from job to job, as her satisfaction was short-lived, or she would leave after some altercation with her employer. At the age of nineteen she returned to the city, in hopes of ascertaining the true nature of her condition. She looked upon her situation with perplexity, and hoped to understand the reason for her dilemma. At one point, she wondered if she were homosexual and if that might be the explanation. She decided to frequent various homosexual haunts, and observe the people there to see if she had anything in common with them. For a short time she lived in a boarding house which was operated and occupied by homosexuals. She soon decided that she was not a homosexual. Although she got along well with homosexuals, she remarked that she did not feel herself one of them. D.L. thought people were accusing her of being homosexual, and she said that they persecuted her, and even beat her up without reason or provocation. Since the age of sixteen the patient had used alcohol, which she explained was a means of escaping her difficulties. At this period she led an almost solitary existence, convinced she was actually a man upon whom fate had played a foul trick.

At the age of twenty-four D.L. moved to another city, presented herself as a man, and obtained work as a clerk. By now she had completely

assumed the role of a man (I will revert to the masculine pronoun). He changed his name from one that was clearly feminine to one that was more ambiguous. At the age of twenty-eight D.L. obtained a bilateral simple mastectomy, but he declined to describe any circumstances attending this procedure. He began taking testosterone, in unknown quantities, with almost complete cessation of menstruation. During the past two years, the patient claimed to have had only three to four menstrual periods. His voice deepened. He felt increased strength, and that he was completely a man. People who met D.L. casually and even those with whom he worked, appeared to accept him as a member of the male sex. At this period, for the first time in his life, D.L. said he felt some satisfaction, and noted great relief of tension and anxiety. He was able to give up the use of alcohol after ten years of excessive drinking.

When D.L. was in his late twenties, his father died, but he saw no connection between this event and other events in his life. In the last few years the patient had become interested in the subject of intersexuality, and began reading about people with conditions similar to his own. He began spending much of his free time in medical libraries, and felt that he had become a sort of authority on this condition. The patient also studied German so that he might read the literature in that language. At the age of thirty, he claimed that he first noticed the appearance of swellings on either side of the vaginal outlet. D.L. decided that these swellings were testicles. He described a fluid discharge from the area of the clitoris, in association with masturbation, which he considered to be an ejaculation of semen. His interpretation of these events was that he had developed primary male sex characteristics. He concluded that he must be a hermaphrodite.

The patient had developed a romantic interest in a young woman who regarded D.L. as a man. Other than kissing, there had been no intimate contact. The patient reported taking a sexually aggressive role. He did not perceive this relationship as homosexual. He would consider any sexual contact with a man with disgust, as though it were a homosexual act. He denied sexual intercourse, or any genital contact with either sex. He admitted frequent masturbation, having used pictures for stimulation. When asked about his masturbatory fantasies, he replied sarcastically that he thought of females, "naturally!" The patient desired to obtain a legal change of status, as well as a conversion operation. He maintained that only in that way could he lead a satisfactory life. D.L. made it clear that he desired a total hysterectomy and that the female organs were of no use to him. The reason in asking for an exploratory laparotomy was that he was certain that testes would be found. D.L. felt this would establish the correct sexual identity and justify the change-of-sex operation.

Psychiatric examination: The patient was seen on six occasions dur-

ing his stay on the urology service. He was dressed in men's pajamas and robe. His hair was cut in a masculine fashion, and his facial features were rather ambiguous. Shoulders were somewhat broader than the hips, which showed little resemblance to the usual female configuration of adipose tissue. D.L. exposed enough of his chest to reveal the fact that his chest was flat. His total appearance was that of an asthenic young man. He was accepted as such by the patients and staff. He was negative in his attitude, and resented being seen by a psychiatrist. He was tense and hostile. Affect was minimal, but not flat. Speech was logical and coherent, but guarded and precise. As he spoke, the muscles of mastication became prominent, and his tone was low-pitched with masculine affectation. Mood statement: "Oh, I'm just fine.", with obvious sarcasm and hostility. Although he spoke freely of his physical situation and anything which substantiated his feelings that he was really a man, D.L. was reluctant to give information regarding his personal life and past history. He described chronic tension and depression, with fatigue, appetite impairment, and insomnia, for which he had taken sedation for some time. He denied suicidal ideation. He was preoccupied with his physical status, and the conviction that he was a man. He would tolerate no challenge to this assertion, and when challenged, he became agitated and verbally abusive. For years he had felt persecuted, particularly by men who, he felt, laughed at him. He projected his difficulties onto society, and felt the environment was hostile to him. D.L. felt many people were made uncomfortable by him, especially men. He thought that the chief resident was avoiding him and that the physicians were laughing about his case.

Despite his educational background, D.L. felt he was involved in medical research as an active participant, rather than an experimental subject, and his conversation on this topic was haughty and grandiose. D.L. considered himself to be psychic, and felt that he could distinguish at sight a homosexual, a transvestite, and a hermaphrodite. Memory and orientation were intact, except for a significant gap in the historical information. General information was good, and he was judged to be of superior intelligence. His ability to distinguish between similar abstract words and to state the meaning of standard proverbs was good and did not indicate the presence of a thought disorder. Except for the sphere of gender identification and body image, there were no bizzare ideas. He insisted that he was a man, despite the appearance of his genitalia, which he felt was explained by the diagnosis of pseudohermaphroditism. He rejected any other interpretation, especially that this might be a psychologically determined conviction.

A complete psychological evaluation of D.L. was performed and has been reported elsewhere (McCully, 1963).[2] The projective materials

[2] The author wishes to acknowledge his gratitude to Robert S. McCully, Ph.D., who performed the psychological tests, for the following summary of his findings.

included the Rorschach, Bender-Gestalt, and drawing series. The patient did not produce any bizarre Rorschach images. His drawings were of excellent quality and offered no suggestion whatever of body-image distortion. There was little direct evidence within the content that would suggest either severe sexual turmoil or psychosexual reversals. There were many indirect signs of disturbance, and these must be considered against a background of relatively good surface adaptation and functionally operative ego control and defenses.

The patient has a bright mind and makes good use of intellectual defenses. He demonstrates very little vitality, and one would suspect a weak sexual drive. His insistence on masculinity could be a denial of the basically inadequate sexual drive. He has concretized his problem and projected it onto society and sees it as not related to himself. His strong conviction of belonging to the male sex is thought to mask paranoid and grandiose qualities. One even thinks of true paranoia as a diagnostic consideration. At the time of the psychological evaluation, there was no evidence for gross disorganization. One may predict that, should his defenses collapse, depression and/or grandiose projection may come to the fore.

On physical examination, the patient was a thin, male-appearing individual who was within normal limits, except for the following positive physical findings: skin showed scant facial hair, moderate hair growth along the arms, legs, and mid-anterior chest. Chest revealed bilateral semi-circular mastectomy scars, well healed. Genitalia revealed male pubic hair distribution and a well formed, adult-sized vagina. Above the vagina there was an urethral opening in the usual female position; labia majora and minora appeared normal. The clitoris was large, 1.3 x 3.0 centimeters in size. Palpation of the labial, inguinal and perineal regions revealed no tissue suggestive of ectopic testes. Speculum examination revealed a normal vagina and cervix; bimanual examination revealed a small, well-formed uterus in the anterior position, with no definite adnexal organs or masses; recto-vaginal examination was confirmatory. A thorough laboratory evaluation was within normal limits, including a 17-ketosteroid level of 11.7 milligrams per twenty-four hours. Buccal smear for sex chromatin was positive, or female. The vaginal smear was suggestive of low estrogenic level. The patient was thought to be phenotypically and genotypically female. All of the above positive physical findings were to be explained on the basis of D.L.'s having taken exogenous androgens of unknown quantity for some time.

The hospital staff felt there was no basis on which to proceed with the exploratory laparotomy, and they refused to recommend a hysterectomy. When told that the diagnosis was that of female transsexualism, D.L. became angry and insisted that he was a pseudohermaphrodite. He insisted that he be given this diagnosis in writing and pleaded that all

of his problems would be solved if his sexual organs could be removed. The patient rejected an offer of psychotherapy and it was evident that he had no intention of altering his conviction of belonging to the male sex. D.L. insisted that, sooner or later, he would find someone to help him achieve his goal of the removal of his female organs and construction of an artificial penis.

I had heard nothing further regarding D.L. for several years until I received a request for the psychiatric evaluation from the staff of another large university hospital. I was informed that D.L. had indeed obtained a hysterectomy and was in the process of having an artificial penis created. After eight surgical procedures, D.L. is still in the process of obtaining his long sought after goal and has withstood the trials of prolonged and sometimes disappointing surgical procedures. This is no small tribute to his psychological stability and stamina.

When confronted with the case of D.L. for the first time, I was still a resident in training and, as already mentioned, had never seen or heard of such a case. I interpreted this disorder as a well circumscribed delusional system, involving a denial of the physical reality of her body. Other than in the sphere of gender identification, D.L. seemed to be functioning adequately, and therefore I made the diagnosis of a paranoid state. Almost the same formulation has been made more recently after the study of thirty male transsexuals (Baastrup, 1966). D.L. demonstrated many paranoid features. He was guarded and suspicious and became hostile and felt persecuted when others would not accept him as a man. He felt he was a victim of society. This reaction has been interpreted as a defense against psychosis whereby the transsexual defends against psychosis by projecting his delusional gender identity onto the group (Northrup, 1959). I suggested the term *paranoia transsexualis* as an appropriate descriptive term for this condition.

D.L. is one of several female transsexuals who requested exploratory laparotomy to prove the existence of male gonads (Pauly, 1963). This impresses one with the strength of their conviction that they are actually male "on the inside." In 1961 I felt there was no evidence to support or justify the request for a change-of-sex operation: "There are no adequate studies to evaluate the results of these surgical procedures. In light of the above interpretation I feel that surgery is contraindicated. It is difficult to understand how a change in the sexual anatomy could alter the intrapsychic dynamics in a positive direction. Nobody would knowingly grant a request based upon a delusional idea." If I were to have seen D.L. today, or three years ago instead of six years ago, my decision would have been different. The physician has to have considerable experience with transsexuals before he is able to entertain the possibility of recommending sex reassignment. In addition to the knowledge of what is available, one has to be secure in his profession, because the physician who recommends sex reassignment or participates in such a decision is

certainly subject to severe criticism from his colleagues. Thus, there is an evolution in the physician's decision-making process.

I do not think my reaction to the initial confrontation with this perplexing problem is unusual. One is loath to recommend surgery and thereby take responsibility for such a serious and irreversible decision. It is easier by far to write the patient off as crazy and get on to other matters, or simply recommend psychotherapy to straighten out the patient's mistaken identity. Nothing less than classical psychoanalysis has been suggested (Ostow, 1953). Others condemn those who recommend or sanction sex-reassignment surgery for transsexuals and feel that such a recommendation represents "collaboration with the psychosis" (Wiedeman, 1953; Stafford-Clark, 1964; Meerloo, 1967). But those who suggest such an approach may not have attempted psychotherapy aimed at getting the transsexual to accept his "correct" gender identity. At best, this is fruitless, but it can be dangerous and result in psychotic decompensation. I wish this were not true, but other comprehensive reviews of the treatment of this condition concur in this opinion (Stoller, 1966b; Wålinder, 1967). It is humbling to acknowledge the limitations of psychotherapy, but better this than to force another human being to suffer because of our inability to accept the reality of the situation. If and when someone demonstrates a method other than sex-reassignment surgery which is truly successful in helping the transsexual, it will be eagerly received. The recommendation for a change-of-sex operation is made reluctantly after soul-searching deliberation, and in view of the fact that no other alternatives are currently available.

What is best for the patient may not be the only consideration on which the physician makes his decision. One report shows that under no set of circumstances did a majority of psychiatrists approve the transsexual's request for a change of sex (Green, Stoller, and MacAndrew, 1966). Even when the request comes after two years of psychotherapy in which the psychiatrist treating the patient thought him reasonable and responsible and recommended the procedure, only 45 percent of the psychiatrists would approve the procedure. When the probability of suicide was raised, should the request be denied, 54 percent of psychiatrists felt that this should not in any way influence the decision. As reluctant as the psychiatrists were to approve the procedure, the general practitioners, urologists, and gynecologists were even less willing to approve. Since only 25 percent of the physicians believed that such patients would definitely be harmed by sex-reassignment surgery, one must speculate that factors other than potential harm to the patient account for the physician's overwhelming reluctance to endorse such procedures. Perhaps fear of censure from colleagues, from medical ethics committees of hospitals, or from professional medical organizations accounts for this attitude. It appears that the primary deterrent is a practical, self-protective one, wherein the physician is reluctant to

jeopardize his hard-earned reputation. An attempt must be made to distinguish between rationalization based upon intrapsychic factors on the part of the physician and serious contraindications with reference to the patient's well being. The physician's paradoxical liberalism in recommending a legal change of sex (75 percent), permission to be identified and marry as a member of the new gender (80 percent), and to even adopt a child (50 percent) after the conversion operation has been achieved, tends to confirm the above impression that it is the responsibility for instigating such procedures and the fear of censure which cause the physician to be reluctant (Green, Stoller, and MacAndrew, 1966; also Chapter 15 by Green).

An attempt should be made to distinguish ideas of gender confusion associated with an acute psychotic state from the longstanding problem of gender identity presented by the transsexual. Krafft-Ebing as early as 1877 described numerous cases of confused psychosexual identification manifested by ideas of sexual metamorphosis, which he felt represented a form of paranoid psychosis and used the term "metamorphosis sexualis paranoia" (Krafft-Ebing, 1877). It is well known that ideas of sexual change are not uncommon in schizophrenia, as is well illustrated by the famous Schreber case (Macalpine and Hunter, 1955; Gittleson and Levine, 1966). Lukianowicz has distinguished between psychosis associated with transvestism in an acute disorganization, which is extremely rare, and long standing gender-role inversion from an early age, in which transvestism may have been part of the picture (Lukianowicz, 1959). This is not to say that the chronic transvestite or transsexual is immune from psychosis, but that an attempt should be made to determine whether the cross-gender behavior and identification is part of a long standing and persistent process as in transsexualism, or only the acute manifestation of a schizophrenic reaction. Obviously, one would never consider a change of sex for the latter individual. Occasionally self-mutilation of the genitalia occurs in acute schizophrenic episodes and is to be distinguished from self-mutilation in transsexualism (Blacker and Wong, 1963; Pauly, 1965). The transsexual, especially the female, is not psychotic or delusional generally, and certainly not schizophrenic in the sense of an acute disorganization. The request for a change of sex is made as the ultimate step in a process that began many years before and is complete by the time the transsexual makes his request known to the physician.

Finally, there is considerable evidence that sex-reassignment procedures are as beneficial for the female as for the male transsexual (Hertz, Tillinger, and Westman, 1961; Wålinder, 1967; Benjamin, 1967a; Pauly, 1968; Chapter 26 by Randall). Of the twenty-eight female transsexuals in Benjamin's series, twenty underwent surgery in addition to hormone therapy. Both hysterectomy and mastectomy were performed on seven patients, with either one or the other procedure on the remain-

ing thirteen. Only two of the twenty-eight patients were in the process of having a penis constructed, as in the case of D.L. The age of these patients ranged from twenty-one to forty-seven years at the time of surgery. The results of operative and endocrine treatment are considered "good or satisfactory" in every case except one doubtful exception (Benjamin, 1967a). Six of these patients were legally married as men to women. Other unoperated female transsexuals, who may or may not have been on testosterone therapy, developed stable relationships with women.

Case Report Number Four

T.S. is a nineteen-year-old Caucasian female who has preferred the male role as long as she can remember. During her first year at college, she developed a homosexual relationship and "felt I was leading a double life." Although she does not condemn homosexuality on moral grounds, she does not feel that the life of a female homosexual is what she is looking for. She feels that homosexual relationships are precarious as "they don't last, and are not satisfying," and she is aware of the possible social consequences. For instance, she hopes to become either a teacher or a lawyer, and is fearful that either of these careers would be closed to her if she were known to be homosexual.

T.S. is the oldest of two daughters whose parents are both health professionals and appear to have provided their children with love and affection. The father, in his mid-forties, is unusually understanding of his daughter's problem. In college he was active socially and athletically and seems to be quite well adjusted. Mrs. S. is also a very pleasant person, active in her profession for many years. Because of a congenital shortness of the palate, she has had to overcome a significant speech problem. She, too, is very understanding, and when the entire family is seen together, they are perceived as being very close, happy, and in good communication with each other. When she was younger, T.S. idolized her father, who worked very hard and was away from the home much of the time. Thus, when the father was home, his presence was valued tremendously. On the other hand, although T.S. felt close to her mother, she simply did not admire her as much as her father. It is clear that she identified herself with her father and remarked that "my father is the kind of husband that I would like to be." She denied any conscious sexual feelings toward either parent.

Her childhood was characterized by the typical cross-gender preferences and behavior which both parents confirm as having been present from a very early age. She never played house or with dolls as her younger sister did. She has always been a good athlete—she can throw a ball like a boy—and has been positively reinforced for these skills by parents and teachers. It should be stated that she did not learn these athletic skills from her father. As early as the fourth grade, she had the feeling that "males have a better deal in our society" and puts

this on an intellectual basis, stating that people do not take what females say as being very important.

After puberty, she developed a rather competitive relationship with boys whom she admired, and became quite successful in competing with them physically as well as intellectually. She has never felt aroused sexually by a boy, but has always wanted to take the initiative as the masculine partner in a relationship with a girl. She sees herself as a boy in her dreams. As she puts it, "up to the last half inch, I am male, but on the surface, I appear female."

This description of a male (identity) trapped in a female body is characteristic of female transsexualism. On one occasion she considered having heterosexual intercourse, but couldn't go through with it because it "felt wrong . . . I couldn't be submissive, I have to be dominant." She could not imagine herself responding sexually as a woman in marriage, becoming pregnant, or bearing children. "I'd like children, but as their father, not their mother." She was aware that her mother enjoys the female role in sex and that she finds it satisfying. T.S. has always had some difficulty with menstruation, which was frequently quite painful physically, as well as emotionally, as it reminded her of her femaleness. Most genital sensations have been quite negative. She denied self-stimulation or masturbation. More recently, she acknowledged that stimulation of her clitoris by her homosexual partner is pleasant, but generally she avoids this because she is most aroused when she is able to stimulate her partner, and "at that moment, I'm not just pretending to be a boy, I really feel I am." Thus, she avoids potentially pleasurable genital stimulation, either through masturbation or in her homosexual relations, because it confronts her with her female anatomy. This is typical of female transsexualism and distinguishes it in some ways from homosexuality.

It became clear that T.S. had developed rather stereotyped ideas regarding males. Generally, she feels that boys are quite aggressive and exploitative, and are attempting to inflate their egos at the expense of their female partners. She feels that boys are quite threatened by her, as she has no intentions of being submissive and dependent. She admits there are some admirable young men, much like her father, who are kind and considerate and would permit a woman the freedom to pursue her own interests and not demand the female's subservience. However, she could not accept the possibility that she might respond to this latter type of male, but rather wants to become such a person herself. There is considerable projection on her part, with a tendency to generalize what the male's intention is before he has had an opportunity to become an individual who may or may not fit into her stereotype. Much of her therapy was directed at helping her to see this aspect of her interpersonal relations with men.

On examination, T.S. was a tall, fairly feminine-appearing late

adolescent female with long blonde hair and white-rimmed glasses, who appeared to be comfortable with her feminine status. After the first few sessions, she no longer wore dresses, but she never seemed very masculine, even when dressed in jeans and a shirt. Thus, in her overt behavior there was very little to suggest a particularly masculine young woman, despite her verbalization to the contrary. She was quite sophisticated in her speech and came across as a sensitive, aware, and bright young person (IQ tested at 128). There was nothing in the psychiatric or psychological evaluation which suggested severe psychopathology in other than the gender and sexual areas. Certainly, there was no evidence for disorganization, loosening of associations, inappropriate or reduced affect, but, on the contrary, she seemed a rather capable person of good character and judgment. Because of the above-stated sexual preferences, it was to be expected that the MMPI pattern would show a striking 49' elevation, but there was clinically nothing to support the impression of a sociopathic or emotionally unstable personality. There was no question that she had been intermittently somewhat depressed, but this had never reached serious proportions to include sleep or appetite impairment or suicidal ideation. Occasionally she suffered from upper gastrointestinal and other physical symptoms which may have some functional or psychophysiologic basis. At one point she had an upper gastrointestinal series which showed some duodenal irritation but no ulcer formation. She had been myopic for many years and wore glasses and contact lenses. Otherwise, she was in good health. On physical examination she was normal except for cutaneous syndactyly of toes two and three bilaterally. Breasts, genitalia, and pubic hair distribution were those of a mature female. Complete chromosomal evaluation including karyotyping revealed a genetically normal female.

There are several points worth emphasizing in T.S.'s case. Unlike case one, there is no obvious explanation why T.S. as a young child should have come to prefer the male role. She admired her father, who is generally considered to be an admirable person, but there was no aversion to her mother, and in fact she has developed in recent years a very close and comfortable relationship with her. She communicates very openly with her mother. Certainly, there are many girls who admire their fathers, and have good reason to do so, who do not identify with their fathers or develop a masculine gender preference. In any event, the intra-family dynamics in this case do not appear pathological, as in the previous cases, and, in fact, the family situation appears, on the surface, to be unusually healthy and happy. The sixteen-year-old daughter is a very happy, well adjusted teenager who has no apparent problem of gender identification. It is precisely this kind of situation which compels one to look closely for a biological determinant, despite the fact that most of the available data from the literature (see previous chapter) do

not suggest organic determinants for gender-role identification. In T.S.'s case there is no physical or genetic abnormality.

It is clear that T.S., like the previous patients, has identified with her father rather than with her mother. All the fathers are physically large and powerful men who participated in athletics. The fathers were physically absent much of the time during the early, formative years of their daughters' rearing, and their occasional presence was very significant and meaningful to the family. Only in these dimensions is there any similarity between the fathers. Contrary to the first three fathers, Mr. S. was never alcoholic. As for the mothers, there is no apparent similarity, although each daughter has developed a somewhat protective attitude toward her mother. It is not clear what, if any, common denominator exists in the mothers of female transsexuals which prevents the identification of daughter with mother, and results, rather, in an identification between daughter and father.

In my mind there is a definite distinction to be made between the first three cases and the last case. Despite her feelings and verbalization, T.S. has not taken some of the irreversible steps which the others had. Her nonverbal behavior does not suggest the masculinity seen in the previous cases. She is not alienated from her family and in fact she has considerable support from them. It is likely that T.S. is still somewhat ambivalent in her gender identification and has some block in accepting a heterosexual relationship on a genital basis. Now that she is aware of the limitations of sex-reassignment surgery and knows that this cannot meet all her hopes, she has decided to consider the matter further before pursuing any course. She cannot be considered a true transsexual at this point. She is considering therapy aimed at helping her to accept her female status in hopes that she might enjoy a heterosexual relationship. One successfully treated case of a seventeen-year-old girl with some preference for the male role allows us to realize that there is such a thing as an ambivalent identification which can be gently guided in the appropriate direction (Philippopoulos, 1964). I hope that one day it might be possible to report that T.S. has accepted—and is happy in—her female role. There is little question that this would be infinitely more satisfactory than the alternative open in the first three cases of female transsexualism presented here.

SUMMARY

Female transsexualism is encountered three to four times less frequently than male transsexualism. This discrepancy may be real, and thus consistent with a higher incidence of sexual variation among men generally, or the result of greater publicity given to cases of male-to-female sex reassignment. Far less has been written about the process of female gender identification and disorders thereof, and this one-sidedness of theoretical attention given to males may be explained by the pre-

ponderance of male workers in this field. Much of the theory of female identification has come from female psychoanalysts. Reference is made to the relatively few case examples of female transsexualism in the English literature, as well as review articles dealing with series of such cases. Four cases of adult manifestations of this syndrome are discussed here.

The cases presented illustrate the progressive and unrelenting nature of this condition, which begins before age five. During childhood there is an identification with a strong, masculine father figure. This father-daughter relationship is not an excessively close one, as is the case between mother and son in male transsexualism. The mothers are perceived by their daughters as weak or ineffectual, or less admirable than father, in much the same manner that fathers of male transsexuals are perceived by their sons. A protective attitude toward mother develops with all the dynamics of a reverse oedipal situation. However, this retrospective analysis is quite tenuous, and one must await more detailed studies early in the genesis of this disorder before the intra-family dynamics can be clarified. While the psychological variables are being investigated, the biological determinants of gender identification are also being evaluated. Neuroendocrine studies on monkeys suggest that androgens present at a critical time in the prenatal development have an effect on the central nervous system which results in the individual's subsequent gender behavior. At the moment, the etiology of transsexualism must be considered uncertain.

By the time female transsexuals seek medical help in early adulthood, they are usually committed to an irreversible course. By this time they have generally passed into the male role and are convincing in playing it. In contrast to their male counterparts, female transsexuals seem better adjusted in their male roles and do not tend to exaggerate masculine characteristics. They demonstrate an all-or-none tendency with fewer gradations of gender-role behavior. It is doubtful that there is any such thing as a female transvestite, but rather there are female transsexuals who wear men's clothes, not intermittently for their erotic value, but continuously as a manifestation of belonging to the male sex. They demonstrate less psychopathology, and their requests for help are not so demanding. Very often their requests for the conversion operation are prompted by a love relationship with a female partner which they hope to legalize. Female transsexuals consider only normal, heterosexual women as sexual partners. Because they do not wish to be exposed as females, they avoid genital contact themselves. Their satisfaction comes in being accepted as men, and even after prolonged, intimate contact, their female partners are not aware of their true identities. Female transsexuals request male hormone therapy, mastectomy, and hysterectomy. The ultimate goal is the creation of an artificial penis. Paradoxically, surgery at the present time has less to

offer to females in terms of creating functional sexual organs, despite the fact that female transsexuals as a group are probably better candidates for sex-reassignment surgery than are male transsexuals.

There is some similarity in the first three cases reported. The fourth case demonstrates some ambivalence with reference to her gender identity. In exploring various alternatives open to such patients it is important to realistically evaluate the technical limitations of the surgical procedures and their limited availability. If any embers of feminine identification remain alive, every effort should be made to fan them. On the other hand, the possibility of change in gender identification, once it has been well established, is nil. Therefore, it becomes critical to determine whether the process of gender identification is complete, or possibly arrested at some point of ambivalence.

The majority of females requesting a change of sex are fixed in their identification with the male role. For these true transsexuals, psychotherapy of a supportive type may be helpful, but there is good evidence that testosterone therapy and surgical intervention is definitely indicated. Until further evaluations suggest contrary results, one must accept sex-reassignment surgery as the only available means of alleviating the suffering of the transsexual individual. In the meantime, the treatment of these patients provides an opportunity to study the process of gender identification and misidentification. In so doing, it may be possible to develop an understanding which will lead to the early detection and successful treatment of such problems, and ultimately to their prevention.

PART II

PSYCHOLOGICAL ASPECTS OF TRANSSEXUALISM

CHAPTER 5

SEX REASSIGNMENT AS RELATED TO HERMAPHRODITISM AND TRANSSEXUALISM

John Money, Ph.D.

INTRODUCTION

For the majority of the human race, psychosexual differentiation or the establishment of gender identity is an orderly, sequential process. It commences with fertilization and is initially dependent on the chance of whether the egg bearing an X chromosome is met by an X- or a Y-bearing sperm. It ends with social interaction and learning in the postnatal and childhood years. The variables or steps in this orderly sequence are nine in number, as follows:

1. *Chromosomal.* Fertilization and zygotic proliferation is, except in special instances, either 44+XX female or 44+XY male, in chromosomal count.

2. *Gonadal.* The primitive gonadal ridge differentiates into a testis or an ovary, dependent respectively on whether the medullary core or the cortical rind proliferates.

3. *Fetal Hormonal.* There are two critical stages of hormonal influence on development, fetal and pubertal. In the fetal male, an unknown inhibiting substance causes vestigation of the mullerian structures; androgen, a known substance produced by the fetal testes, causes development of the internal male organs and, a little later, of the external male genitalia. In the absence of these two substances, any fetus, whether genetically or gonadally male or female, develops into a morphologic female.

4. *Internal morphological.* The mullerian ducts of the female and the wolffian ducts of the male are laid down in parallel, initially, whereupon one proliferates and the other degenerates to form either the female or the male internal structures respectively.

5. *External morphological.* In the male and the female, the main

anatomical parts of the external genitalia are homologues of one another. The penis and the clitoris are homologous parts, as are the labia minora plus the clitoral hood and the skin of the penis, and the labia majora and the scrotum. When androgen is present, the masculine homologue differentiates, and when androgen is absent, the feminine form develops.

6. *Neural (hypothalamic).* In lower mammals, there is recent experimental evidence indicating that fetal androgen influences differentially the organization of nuclei in the hypothalamus of the male and female. These nuclei will subsequently control the cyclic function of the pituitary and, in all probability, the corresponding patterns of mating behavior. The principle is that androgen masculinizes. The significance of these findings for human beings is still speculative. There are, as yet, no known human syndromes which can be ascribed to an error in the hormonal and sexual organization of the central nervous system.

7. *Assignment and rearing.* Almost without exception, sex is assigned on the basis of genital anatomy. Exceptions occur in the case of genital ambiguities due to hermaphroditism and, perhaps, in very rare cases of parental psychosis when the child is anatomically normal.

8. *Pubertal hormonal.* At puberty, androgen controls masculine maturation. Estrogen, with progesterone, controls feminine maturation of the body.

9. *Gender identity.* Usually the sense of gender identity and gender role differentiates as a postnatal phenomenon in conformity with the genetic, hormonal and morphological sex, and in conformity with the sex of assignment and rearing. The latter themselves dictate social experiences of a sexually dichotomous nature which will be encountered. Gender identity differentiation is particularly active in the three or four years after language acquisition until school age. It finally reaches its full expression with adolescent sexual maturity.

The orderly coherence and congruity of all the variables of sex, issuing finally in the establishment of a gender identity, is usually taken for granted. In actual fact, errors are possible, and an error may take place at any point along the line. Once having taken place, an error will have repercussions on the steps in developmental sequence that lie ahead. The amount of disparity between the successive steps in development will be different according to the nature of the error and the syndrome it produces. In some cases, though by no means in all, the final outcome will be a need for a change of official sexual status, that is to say, a sex reannouncement or a sex reassignment.

Though reannouncement and reassignment are essentially synonymous, it is convenient to reserve the term, reannouncement, for those cases in which the change of sexual status is made shortly after the birth announcement has been issued, or at most within a few weeks, and before the baby can be expected to have any subsequent recall of

the event. By contrast, a sex reassignment is made later in childhood, adolescence or adulthood.

A sex reassignment in childhood—which normally takes place only in cases of hermaphroditism—may be imposed without consulting the child and without consideration of whether the psychosexual identity already differentiated is in conformity with the imposed change. In that case, the imposed change, however satisfactory anatomically and hormonally, is unlikely to be assimilated psychosexually. One possible outcome is that the child subsequently, usually in adolescence, seeks a reversal of the change, namely, a second reassignment back to the sex of original rearing as announced at birth.

The relationship of sex reannouncement or reassignment to errors of differentiation is examined in what follows. Since a given error of differentiation manifests itself at more than one stage in the sequence of differentiation, the classification is based on the stage at which an error produces the greatest discrepancy between what preceded and what will follow developmentally.

Sex-Chromosomal Errors

The normal chromosome complement is in the male 44 autosomes plus an X and a Y chromosome (44+XY) and in the female 44+XX. Many different chromosomal (cytogenetic) errors are known, only a few of which are errors of the sex chromosomes themselves.

Triple-X Syndrome

One such error is that of too many X chromosomes, usually three instead of two, in an anatomically normal female. This triple-X condition may be associated with mental deficiency, though not always. It is compatible with pregnancy. It is not associated with problems of psychosexual differentiation and issues of sex reassignment do not arise.

Turner's Syndrome (Gonadal Agenesis or Dysgenesis)

Another chromosomal error is that found in girls with Turner's syndrome. Most commonly, one of the sex chromosomes is missing and the chromosome complement is 44+X0, the total being 45 instead of 46. There are other more rare chromosomal variants of the syndrome, for instance when one of the two X chromosomes has a segment missing or when some cells have one and some two X chromosomes (X0/XX mosaic)—and there are others.

The two pathognomonic symptoms of Turner's syndrome are absence of the ovaries (gonadal agenesis or dysgenesis) and short stature in a person with the body morphology of a girl. Should an exploratory operation be performed, the ovaries look like streaks instead of round and plump. They make neither eggs nor female sex hormones. The

affected person will, therefore, be sterile and will remain sexually infantile in appearance until treated with female sex hormones.

The genetic defect in Turner's syndrome is associated with many other impairments which may or may not occur in a given individual. These deformities include webbed neck, webbed fingers and toes, small receding chin, pigmented moles, epicanthal folds (resembling oriental eyes), blue-baby and other heart defects, kidney and ureter defects, and hearing loss.

Psychologically, girls with Turner's syndrome are rather exceptionally stable, which is surprising in view of the problems attendant on short stature, pubertal failure and the prognosis of sterility which they have to face up to. They are not particularly prone to mental retardation, despite assertions to the contrary in early reports. A large proportion of them do, however, have a degree of motor clumsiness and a specific cognitional deficiency in space-form perception which may be called space-form blindness and directional-sense blindness. They invariably differentiate a feminine psychosexual identity and from early childhood manifest strong maternal interests. They are excellent in the care of small children and make good adoptive mothers. There may be some relationship between the strength of femininity in their lives and the absence of any gonadal hormones, androgenic or other, to exert an influence during fetal development. It is obvious from the foregoing that the absence of an X chromosome does not predispose to ambiguity or other problems of gender identity. In fact, I do not, in my experience of over eighty cases, know of a single case of Turner's syndrome in which there was even a hint of a sex-reassignment desire.

Klinefelter's (XXY) Syndrome

The sex chromosomal error in Klinefelter's syndrome is a redundancy of the X chromosome. Typically there is only one extra X chromosome (44+XXY), but there may be two or even three extra; in one variant the chromosome count is 44+XXYY, and there are others.

The patient with Klinefelter's syndrome is anatomically a male. The body type is typically tall and slender—though it is occasionally obese—with the disproportionately long arms and legs of the eunuchoid build. For reasons not yet accounted for, some patients develop breasts (gynecomastia) at adolescence. The penis is small and so are the testicles, which do not develop normally at adolescence. The spermatic tubules become hyalinized and unable to make sperms, with resultant infertility.

Psychologically, men with Klinefelter's syndrome are unusual. More of them are mentally retarded than one would predict in random sampling, though some are superior in IQ. Many are beset by personality problems of one type or another that may be as serious as schizophrenia. There is no one psychiatric disorder that occurs with outstanding fre-

quency. It is rather that individuals with Klinefelter's syndrome are, as a group, more prone to any and all of the psychologic disorders, including the psychosexual disorders.

Because of their peculiar chromosomal status, which seems to leave them cytogenetically between the sexes, it is of special interest that some few men with Klinefelter's syndrome are also transvestites and transsexuals. Since both Klinefelter's and transsexual syndromes are rare, it is probably beyond the bounds of coincidence that the two should sometimes coexist, as has been reported from the United States and Europe (Money and Pollitt, 1964). The most likely explanation is that a general psychologic instability is pathognomonic of Klinefelter's syndrome and that this stigma renders a developing boy with the XXY chromosome constitution unusually vulnerable to an error in psychosexual differentiation. This error may be triggered by what, to any other child, might be a trivial environmental stimulus or stress. The end result is the transsexual condition which, in most other transsexuals, occurs on the basis of a quite different vulnerability and without an XXY or any other identifiable cytogenetic anomaly.

It is a rather remarkable characteristic of men with Klinefelter's syndrome, whether they have a psychosexual anomaly or not, that they are low-powered in sexual drive. Some of them are extremely low-powered. They may also be incapable of responding somatically or psychically to injections of additional male sex hormone. The significance of this observation is that some male transsexuals who do not have the XXY syndrome are also relatively low-powered in sexual drive. It is inconsequential to them whether or not they achieve an erection and/or ejaculation during sexual relations in their preoperative life, while they still have a penis.

The XYY Syndrome

Males with an extra Y chromosome are difficult to identify since their anomaly does not manifest itself on any rapid screening test as is the case when an extra X chromosome is present. A supernumerary X chromosome is evident as a sex chromatin spot in the nucleus of all cells, for which there is a quick, easy test. A supernumerary Y chromosome can be discovered only through the laborious and time-consuming procedure of a full chromosome count. It is not surprising, therefore, that the XYY syndrome was discovered only nine years ago. It came to light again in 1965 in a cytogenetic survey of a prison population. It is possible that the extra Y chromosome will prove to be associated with a tall, thin body habitus and with unself-disciplined and impulsive behavior, including sexual behavior. There is no known specific association, however, with transvestism or transsexualism. Contrary to current popular assumptions, the XYY individual is not overendowed with aggression (unpublished data), though his impulsiveness, if present, may

lead to acts of anger and destructiveness, which have included sex-killing in a few celebrated instances. Socially, the XYY person is likely to be self-sufficient and a loner, even to the point of raising diagnostic suspicions of psychosis and/or brain damage. There may be actual clinical evidence of epilepsy. All levels of IQ are represented.

Gonadal Errors

Testicular Feminization—Simulant Female

The testicular feminizing syndrome occurs in a genetic 44+XY male. Sexual differentiation at the earliest stage of fetal life takes place as a male. The sex glands become testes and the substance which inhibits the mullerian ducts causes them to regress, as they normally should do in a male. The internal organs, insofar as they are differentiated, are predominantly male. Thereafter, the testes produce androgen, as they should also normally do in a male, but the cells of the body are unable to accept this androgen and use it. One infers that there is a congenital enzymatic defect which prevents a normal response to androgen, although the biochemical nature of this defect is not yet known. It is obviously an hereditary defect, because it has been traced, in some families, through at least three generations.

In the normal male, androgen from the fetal testes is responsible for the masculine differentiation of the external genitalia. In the testicular femininizing syndrome, since androgen is without effect, the external organs differentiate as female. They cannot be distinguished from those of the normal female.

At the time of puberty, the body's own androgen is still without effect, even to the extent that in some cases pubic and axillary hair which is androgen dependent fails to grow. Female pubertal characteristics do, however, develop, under the influence of the small amount of estrogen, the female hormone, normally produced by the testes in the male. The result is that individuals with the testicular feminizing syndrome perfectly simulate the female in bodily appearance. There is nothing half-way here. The simulation of physique is perfect. However, there is no menstruation owing to lack of a uterus; and the vagina usually requires surgical lengthening for perfect ease in intercourse. At the same time it is usual to remove the testes from their location in the groins, since the pressure of body contact in intercourse makes them painful and since some authorities think they may, possibly, be liable to malignancy. After they are removed, the woman experiences premature menopausal symptoms unless given female hormonal replacement therapy.

Because babies with the testicular feminizing syndrome look like females, genitally, they are assigned and reared as girls. Usually their condition passes unrecognized until menstrual failure draws attention to it in teenage or later. They undergo a psychosexual differentiation as

female. Usually they marry and have a family by adoption, making very good mothers. There are no problems of psychosexual ambiguity and no requests for reassignment of sex to live as a male. The influences of body shape, hormonal response, and life experience completely override the contradiction of the chromosomes and the gonads.

The testicular feminizing syndrome can be simulated experimentally in animals by administering a new drug, cyproterone, to the pregnant mother. This drug is an antiandrogen and prohibits the use of androgen at the cellular level (Whalen, Luttge, and Green, 1969). Its effect on a male fetus is to inhibit masculine differentiation of the external genitalia which become anatomically female instead.[1] Masculine sexual development at puberty can also be suppressed by continued use of the drug, or by castration, and feminine development induced by administration of estrogen. Cyproterone, when it has been governmentally approved for human use, will probably be valuable in the preoperative treatment of male transsexuals because of its androgen-antagonistic effect.

Testicular Feminization—Hypospadias and Breasts

The testicular feminizing syndrome is at its most complete when the sexual organs perfectly simulate the female and the pubertal development is exclusively female. There would appear to be also a *forme fruste* of this syndrome in which, in the fetal development of a genetic 44+XY male, the external genitalia are incompletely male (hypospadias) but not so incomplete as to be perfectly female. In these cases, the pubertal development may be described as either weakly masculinizing or partially feminizing. The chief feminine characteristic is the development of breasts similar to the gynecomastia encountered in some cases of Klinefelter's syndrome and also in some cases of morphologically normal boys. In the latter there is no known abnormality other than prominent breast enlargement at puberty.

Hypospadias is a condition in which the fetal differentiation of the penis remains incompleted. The skin of the penis does not wrap around the shaft of the organ and fuse on the under side as it should do to form the urethral tube. Instead of a tube, there is an open gutter. In somewhat similar fashion, the skin of the two sides of the scrotum does not properly fuse in the midline. The result is a cleft or partially cleft scrotum. There is an orifice where the base of the penis and the scrotum should join. This orifice houses the urinary opening and in some cases the opening of a vaginal pouch also. Prior to surgical repair, urination is accomplished from the sitting position only.

There are varying degrees of hypospadias, so that the urinary opening may be located anywhere from the penoscrotal junction to near the tip of the penis. All can be repaired surgically, the ultimate success being dependent on the size of the deformed penis to begin with. The penis

[1] For effect on behavior, see Doerner (1969).

may be little bigger than a normal clitoris. Then the outlook in terms of adult sexual life, for a child reared as a male, is very poor indeed.

In the past, it has not been possible to predict in advance whether a newborn baby with hypospadiac male hermaphroditism, as above described, will at puberty prove to feminize with breasts, or not. Today, a new possibility of prediction exists, namely, a trial application of testosterone ointment to the hypospadiac penis. If the penis is unresponsive to the local application of testosterone, then one may infer that all other cells of the body will be unresponsive too, and that the case is one of testicular feminization. If the penis is responsive to testosterone ointment, the possibility of breast enlargement at puberty is not ruled out. There may possibly be a need for breast-removal surgery (mastectomy) at that time.

A positive response of the penis to a testosterone-ointment test in the newborn period is a reasonable guarantee that after puberty it will be capable of the normal erectile and ejaculatory response to androgen, whether endogenously produced or exogenously supplied. This test is, therefore, of considerable importance in deciding whether to assign an hypospadiac hermaphroditic male infant as a boy or a girl. It is cruel to assign a child to be a boy when he has not only a very small penis needing repair, but also one in which all masculine function will be chronically suppressed by a biochemical defect inhibiting the use of androgen.

Lacking today's knowledge, doctors and parents in the past have assigned male hypospadiac hermaphrodites with the testicular feminizing condition sometimes to the male and sometimes to the female sex at birth. The most usual outcome is that psychosexual differentiation takes place in accordance with the sex of assignment and rearing. This was the case in the six older patients I have studied, one raised as a female, and five as males. The girl established a feminine psychosexual differentiation despite a large, visible phallus. Two of the boys had an exceptionally small penis and all were poorly virilized physically. They established a masculine psychosexual identity, nonetheless.

These cases, then, are extremely instructive in demonstrating that physique and bodily function are not overriding determinants of gender identity. They did not, in the present instances, lead to requests for sex reassignment as a female. If such requests had been made, one would very readily have been able to justify them on the basis of the body's appearance. The patients wanted, instead, whatever help they could get surgically and hormonally to improve their bodily appearance in conformity with their masculine gender identity which agreed with the sex of rearing. Unfortunately for the five who live as males, the hormonal help that can be given is less than desired, because in this syndrome the body is relatively insensitive to androgen.

True Hermaphroditism

By conventional usage, hermaphroditism is defined as true when both testicular and ovarian tissue are represented in the gonads. There are various possible combinations, the most common being probably an ovotestis on one or both sides. Alternatively, there may be an ovary on one side and a testis on the other, or one of each on both sides. All types of true hermaphroditism are rare, though they may occur more often than they are actually identified, since a biopsy specimen of a gonad which will not be removed in toto does not necessarily reveal the structure of the entire gland.

The external genitalia of a true hermaphrodite are typically unfinished as either male or female and may resemble either one more closely than the other. In other words, there may appear to be an enlarged clitoris with a large urogenital sinus below it, housing the orifices of both the urethra and the vagina. Or there may be what appears to be an unfinished penis with an open gutter in the place of the urethral tube and a urinary orifice at its base, requiring urination in the sitting position. Two cases have also been reported of what appeared to be a normal penis and two with a peculiar, short urinary structure with a urethra of excessive diameter that enclosed what seemed to be a urogenital sinus into which a vagina opened.

The internal organs in true hermaphroditism are variable, but usually contain components of both the male and the female. It is possible, in lateral true hermaphroditism, to find female development on the side of the ovary and male development on the side of the testis. The lateralizing tendency may continue into puberty, with predominant breast development on the ovarian side. Other true hermaphrodites have either two breasts or none at all. It is unusual to have evidence of estrogenic and androgenic function simultaneously, as in a case of lateral true hermaphroditism. Ordinarily the one hormone dominates and suppresses the influence of the other. Thus, estrogen is a functional castrating agent in the normal male and inhibits testicular production of androgen. Conversely, excessive amounts of androgen, as found in the adrenogenital form of female hermaphroditism, suppress the action of the ovaries which fail to secrete estrogen.

Cytogenetically, true hermaphrodites most commonly exhibit the 44+XX chromosomal count. Some cases of mosaicism have been reported, and other possibilities exist also.

There is no special tendency among true hermaphrodites to grow up to request a reassignment of sex. Most commonly the gender identity differentiates concordantly with the sex of assignment. An occasional case has been recorded of ambisexual morphologic appearance, ambisexual rearing experience and ambisexual identity.

Hormonal Errors, Fetal and/or Pubertal

Female Hermaphroditism: Adrenogenital Syndrome

An error of adrenocortical function which is genetically based as a recessive trait produces this type of hermaphroditism in the chomosomal (44+XX) female. The adrenal cortex fails in its normal work of synthesizing cortisone and releases instead an incomplete product which has the masculinizing physiologic properties of androgen, the male sex hormone. This masculinizing influence does not come into effect until after the ovaries and the internal reproductive organs have been normally formed. It does, however, decide the fate of external genital differentiation. The external genitals become masculinized. In a few cases, the masculinization is so complete as to produce a normal-looking penis and scrotum, the latter being, of course, empty. More commonly, the penis is not so perfectly formed but is hypospadiac, that is, the urinary orifice is more or less in the female position and lies in a urogenital sinus which also communicates with a vagina. In the place of a urinary tube, the penis carries an open gutter, as is typical in hypospadias. In the mildest cases of adrenogenital hermaphroditism, masculinization is limited to enlargement of the clitoris while the urinary and vaginal orifices appear in their proper positions, instead of being mislocated within the vault of a urogenital sinus.

The abnormal androgenic activity of the adrenal cortex which produces the anatomical abnormality of the genitalia in fetal life continues its abnormal effect postnatally by producing excessive early growth and sexual maturation, but always of a masculine type. Since 1950, it has been possible to control this abnormal growth and to normalize the activity of the adrenal glands by treatment with physiologic doses of cortisone. In an earlier time, however, many people grew up with the disfiguring, masculinizing condition.

Affected infants who have the penis fully formed may easily pass undiagnosed at birth, unless they have some other tell-tale symptom, like excessive salt loss or hypertension, to attract attention. These undiagnosed infants will be accepted as boys with undescended testes and assigned and raised accordingly. Then they differentiate a gender identity as a boy. The converse will happen when the diagnosis is established neonatally, surgical feminization carried out, cortisone therapy instituted and the child assigned and raised as a girl. Such children differentiate a gender identity as little girls, most probably with tomboyish traits of athletic energy expenditure and not much interest in doll-play as a rehearsal of motherhood.

Affected infants born with visible ambiguity of the external genitalia will usually be recognized as hermaphroditic. Since the visible evidence of the ambiguity can be identical in male or female hermaphrodites—or true hermaphrodites—it was quite possible, in an earlier time of

diagnostic unsophistication, for some patients to be assigned as female, and a few as male. The rule of psychosexual differentiation then proved to be the one that holds for hermaphroditism in general, namely, that gender identity differentiates to agree with the assignment and rearing into either feminine, masculine, or ambiguous, dependent on the consistency of rearing. Ambiguity may be introduced as a by-product of medical and parental indecision and an attitude of wait-and-see; as a product of a sex reannouncement; as an effect of a too great discrepancy between genital appearance and assigned sex, when corrective surgery is delayed; as a consequence of teasing and other ways of having attention drawn to the genital defect—in fact by anything that discredits the conviction that the sex is as it is declared to be.

In the cases of adrenogenital female hermaphroditism I have seen, I have obtained follow-up in adolescence on four among six patients raised as males and allowed hormonally to virilize. Three showed no equivocation of gender identity and no desire to be reassigned. The fourth elected to be reassigned as a girl at age twelve. The corresponding number of patients, now teenaged or adult, raised as girls and hormonally virilized through lack of cortisone therapy is thirty or more. One of these was reassigned as a boy at age eleven, successfully and at his own request. Among those living as girls, there was a widespread tendency to tomboyish athletic energy expenditure. They also tended to be easily aroused to initiate sexual activity with their lovers or husbands—or in masturbation—as a consequence of visual or narrative stimulation. This trait is usually more typical of the male than the female. Only the arousal pattern was masculine, however, not the imagery nor the direction of object choice. Three of these girls, two of whom eventually married, gave a history of bisexual activity. In one other, with elective mutism, homosexual activity was suspected though not admitted. Four others who were otherwise feminine reported bisexual fantasies; two of these were married. None considered herself to be a man, dressing and carrying herself as a man and requesting reassignment as a male. By contrast, there were many who differentiated monosexual feminine gender identity, eight among them being married, three with their own children and one with two adopted children. One other had an illegitimate child.

These adrenogenital cases are particularly instructive with respect to the effect of male sex hormone on psychosexual differentiation and the extent to which it is without widespread effect. The patients belong to the generation for whom no effective treatment was available in childhood. Therefore their bodies were supplied with excessive amounts of androgen. It was only later in life that they began cortisone therapy and continued it permanently, with the resultant effect of obtaining breast growth, menstrual periods and partial reduction of masculine hirsutism, but no reversal of the masculine-pitched voice (see Chapter

6). Thus these patients grew up to look masculine in physique, some of them grotesquely and mortifyingly so. In addition, many of them did not get feminizing genital surgery until late in life, so that they had the handicap of a genital appearance that looked masculine to themselves and anyone else who saw it. All in all, these adrenogenital cases are remarkable in showing the degree to which hormonal (androgenic) function does not control psychosexual differentiation and does not dictate a desire for sex reassignment, even when the androgenic influence persists uncorrected into childhood and/or adulthood.

In the future, it will be possible to contrast the present findings with those obtained from a group of adrenogenital patients, raised as girls, in whom adrenal androgens were kept regulated from birth onward by means of cortisone therapy. This therapy, discovered in 1950, became widely available only after the mid-fifties, so that most early-treated patients are still too young for complete erotic experience on which to report. It is known, however, that though they incline to tomboyish energy expenditure, and in a few instances express a childish wish to have the fun of being a boy, none indicates a true sex-reassignment desire.

Gynecomastia

It is possible to obtain breast development (gynecomastia), sometimes remarkably complete, in the normal adult male with 44+XY chromosomes by the administration of female sex hormone. When breasts develop spontaneously in an adolescent boy, their presence cannot be attributed simply to too much estrogen. Some apparently normal boys who develop large breasts also virilize quite adequately in other respects, thus disclosing no evidence of too much estrogen and not enough androgen production in the testes. This latter explanation in terms of imbalance may possibly apply in cases of breast development in Klinefelter's XXY syndrome, for some of these patients are weakly virilized and eunuchoid. Even in these cases, however, the problem may be one of a localized insensitivity to androgen; the target organ would then respond to the body's normal production of estrogen, and develop femininely.

The typical reaction of a boy with gynecomastia is to be mortified by his condition. He will often bind his breasts with a wide bandage in an effort to keep his chest at flat as possible. He will retreat from the company of his age group lest they discover his abnormality. Those who are not successful in keeping their secret, but are forced to appear undressed in the school shower or locker room, are quite likely to be teased with remarks about being a "morphodite," changing sex, being a woman, or having a baby and breast-feeding it. Even without these remarks, the boy may already have harbored secret fears that his breasts are the first sign of a change of sex. He may reject the idea as

totally ego alien, while at the same time having the necessary scientific information so inaccessible to him that he has no way of predicting what actually will be the outcome of his anomaly. Anguish in anticipation of what he may find out seems in some instances to have kept a boy from seeking help. Such a boy, once he gets to a doctor and is told that he can be helped by having his breasts removed surgically (mastectomy), may still be unable to face the reality of his abnormality. Instead of having his operation, he may go metaphorically into hiding again, as though disregarding the problem long enough could make it disappear spontaneously and would restore him to normality.

All in all, the emotional repercussions of breast enlargement in a boy may be very disruptive of adolescent maturation socially, academically, vocationally, and in personality development. These various disruptions, however, seldom if ever happen to coincide with a gender identity problem or produce a gender identity crisis that issues in a desire for sex reassignment. The individual's response to the error in hormonal function and the change of body image is to want to return to the former status. He does not experience a change of gender identity in conformity with the changes in his body.

Internal Error

Male Hermaphroditism with Uterus and Normal Penis

There is one error of embryonic differentiation where the locus of the contradiction is in the internal reproductive organs only, namely in a form of male (44+XY) hermaphroditism in which the external organs look normally masculine whereas internally the uterus and fallopian tubes are developed as for a female. The internal male organs are also present, along with two testes. One of the testes may be descended, or they both may be abdominal. The condition is usually discovered when a testicle on one side tries to descend, pulling down with it the uterus and tubes to form a hernia in the groin which needs surgical attention.

Proliferation of the mullerian ducts to form the uterus and fallopian tubes, instead of their regression as expected in a male, is believed due to an absence of the inhibiting substance normally produced by the fetal testis. The other function of the testis, androgenization, seems not to be affected, since the final stages of anatomical differentiation are normal for the male. Puberty also is normally masculine, and the condition is believed to be compatible with fertility. There are no recorded instances of a desire for sex reassignment associated with this type of hermaphroditism.

Hypospadiac Male Hermaphroditism with Uterus Differentiated

A related internal error may occur in male hermaphrodites who also have an imperfectly formed (hypospadiac) penis, namely a con-

dition in which the testis on one side failed to develop embryonically. On this side, the mullerian organs develop into a half uterus and one fallopian tube. On the other side, the testis, even though it may be imperfect, is sufficiently well developed to perform its proper fetal functions, so that the internal organs on that side are differentiated as male. In yet other cases, there is a partial testicular failure on both sides, so that a fairly normal uterus differentiates. In all cases, the testis fails in its final embryonic task of producing enough androgen to permit full masculine development of the external organs. The resultant unfinished, hypospadiac organs are similar to those described for testicular feminizing with hypospadias and breasts and for the adrenogenital syndrome. The unfinished penis may be so small as to resemble a clitoris. It is quite possible for a baby with this condition to be assigned as a female, and indeed, this is the ideal decision in cases where the external genitalia are incapable of eventual reconstruction for normal masculine sexual functioning. As in other cases of male hermaphroditism, one usually expects the gender identity to differentiate in accordance with the sex of assignment, provided there are no sources of ambiguity and equivocation to interfere.

The desire for sex reassignment may eventually occur, but it has not been a feature of the cases I have followed and/or seen in adolescence. There were five such, all reared as female. All had been aware of having an enlarged phallic organ at some time in their lives. In fact, only one was surgically feminized before puberty. This girl, operated at the age of three years and three months, was one of the two who were more tomboyish than the others in physical energy expenditure and recreational play interests. All of them grew breasts and were able to menstruate when given cyclic treatment with estrogen after early teenage.

Since the advent of the chromosome counting technique in 1959, it has been discovered that some hermaphrodites who would formerly have been classified as of this present type actually do not have a normal 44+XY male chromosomal pattern. Instead, there is a chromosomal anomaly, as in one patient with a mosaic chromosomal pattern 44+X0/XY, that is, some cells had the Y chromosome missing whereas others did not. In another case, no chromosome was missing, but one, presumably the Y, had a segment missing. Patients so affected usually appear to be short in stature. They may be raised as a boy or girl. The verified cases are few, but they do not show any special tendency toward a desire for sex reassignment.

External Error

Progestin-Induced Hermaphroditism

In the adrenogenital syndrome of female hermaphroditism, an excess amount of masculinizing hormone is produced in the fetus by its own

adrenal cortex. Progestin-induced hermaphroditism also occurs in females with the 44+XX chromosome constitution, but in this case the excess amount of masculinizing hormone comes from the mother and not the fetus. One is not considering here the rare case of androgen which is produced by a tumor or other source in the pregnant mother, but of androgen which derives from synthetic progestin (pregnancy hormone) administered to the mother to preserve a pregnancy threatened by early miscarriage. In a very few instances of this treatment, when the fetus is a female, it is affected when the external genitalia are being differentiated and they become masculinized either slightly, moderately, or strongly. The internal organs differentiate as female. The anomaly is readily rectifiable with corrective feminizing surgery in the early neonatal period, so that the girl can grow up undisturbed by the condition that existed at birth. Pubertal development is normal, without need of treatment.

The special interest of this type of hermaphroditism lies in the possibility that fetal androgen may also influence the central nervous system and the eventual development of behavior in a masculinizing way, as has been recently demonstrated in a small series of animal studies. With this possibility in mind we have, in my unit, examined nine girls and one teenager with a history of progestin-induced hermaphroditism. The findings indicated that, if there is something of a fetal hormonal effect on subsequent behavior, it is limited in scope and does not induce anything approaching a complete psychosexual reversal in a genetic female. As much as one can ascertain anything about romance and eventual erotic object choice in a female, there was no evidence of lesbianism or repudiation of the gender role of the sex of assignment. There was, however, a rather high frequency, involving in each instance most or all of the girls, of outdoor athletic interests and vigorous energy expenditure; of being known to oneself and others as a tomboy; of liking boys' toys in preference to dolls; of giving priority to career over marriage or at least combining the two in future expectancies; and of preferring casual, masculine-derived clothing styles over feminine ruffles and frills.

Somewhat similar findings were obtained for a corresponding group of juveniles with the already mentioned syndrome of female adrenogenital hermaphroditism, all living as girls, all regulated since birth by cortisone therapy, and all surgically feminized from an early age. By contrast, the findings on a group of girls with Turner's syndrome were completely the converse of the above, and also the converse of masculinizing hermaphroditism with respect to fetal hormonal effects; having no gonads, they have no fetal gonadal hormones, and so differentiate as females morphologically and have no central nervous system exposure to fetal androgen. The fact that they also are not exposed to estrogen from the fetal ovaries appears to be of no consequence, because animal studies have shown that the opposite of the androgen effect is induced not by estrogen but by the absence of any hormone whatsoever.

This comparison of progestin-induced hermaphroditism with adrenogenital hermaphroditism and with Turner's syndrome is of special interest concerning sex-reassignment, for it shows that, whereas fetal hormones may possibly have some influence on subsequent behavior, fetal androgens do not appear to have any direct relationship to a desire for girl-to-boy sex reassignment. The converse of this conclusion also holds true. When female hermaphrodites were assigned and raised as boys, in the four cases of the female adrenogenital syndrome mentioned above, only one requested to be reassigned.

Babies with progestin-induced hermaphroditism usually are correctly diagnosed at birth and assigned as girls. I do not yet know of any raised as boys whose hermaphroditism was a result of maternal medication; but I do know of two rare and remarkable cases of the spontaneously induced type who have always lived as males. Both of these patients are now grown men. Their anomaly was first correctly diagnosed when, at age eleven, menstrual blood escaped from the urinary orifice. Both had undergone masculinizing operations externally. They were given a panhysterectomy as well and treated with male sex hormone to produce masculine body characteristics. Because of the smallness of the genitals, both have been embarrassed and handicapped sexually. But both had differentiated a masculine gender identity and have since maintained it in adulthood. One has married and raised two children, one by donor insemination of the wife, the other by adoption.

To summarize, in cases of female hermaphrodites assigned as males, there typically was no special frequency of occurrence of an urge to seek reassignment as a girl. Conversely, in the same types of female hermaphrodite assigned as females, there was, typically, not an urge to be reassigned as a male, even when bisexual tendencies were expressed. Moreover, in those atypical cases when a desire for reassignment did occur, both the change from male to female and from female to male were represented. The urge for sex reassignment evidently is not directly or inevitably associated with the factors responsible for the congenital anomaly of hermaphroditism itself—at least insofar as female hermaphroditism is concerned.

Male Hypospadiac Hermaphroditism without Uterine Differentiation

In this form of male hermaphroditism, there are no female structures internally. Breasts do not develop at puberty. The testes are undescended or only partially descended. The external appearance is the same as may be found in male hermaphroditism with hypospadias of the penis and breast development at puberty, or in male hermaphroditism with hypospadias and a uterus present. The same external appearance may be found also in female hermaphroditism or true hermaphroditism. This similarity of outward appearance in the different forms of hermaphroditism is possible because nature's plan in creating the external genitalia is

to take the same initial structures and make them into components of either the male or female genitalia. To recapitulate what has already been mentioned in the preceding sections of this chapter, the genital tubercle grows to become the penis or retracts to become the clitoris. The skin which wraps around the penis and fuses, along the midline of the underside, to form the urethral canal, has its homologue in the hood of the clitoris and the lengthways extension of this hood as the labia minora. The skin of the scrotum, which also fuses on the midline, is the homologue of the labia majora which remain unfused to reveal the genital openings within the cleft. The state of incomplete differentiation in the male looks identical with that of partial masculinization in the female; in both cases there is an organ that can be either a large clitoris or a small penis. This organ has under it an open gutter instead of a covered urethral tube. The urinary orifice is at its root or base, more or less in the female position. The opening at the base may be small and lead directly to the bladder, with no forking to a vaginal passage; or it may be a quite large urogenital sinus into which both orifices, the urinary and the vaginal, open. The vaginal passage may either connect with the cervix of a uterus (as it always does in female hermaphroditism) or end blindly.

There are less severe degrees of hypospadias than the one just described. In the least severe form, the opening of the penis is only slightly misplaced from the tip to a position on the shaft of the penis, and the testes are descended into the scrotum. In these mild degrees of hypospadias there is no reason to be uncertain of the sex of the baby at birth. He is assigned as a boy and given later surgical correction, if necessary. I know of one boy with such an anomaly which was corrected in childhood, but also made the subject of a taboo never to be explained or discussed. He grew up after puberty to have to face with great difficulty the fact of being homosexual in his desires. He was not effeminate in manner and had no inclination toward sex reassignment. His homosexuality might have been either coincidental to his genital defect, or a product of it.

In the severe form of hypospadias, when the urinary orifice is at the base of the penis where it joins the scrotum and when the testes are undescended, it is impossible to be certain at birth of the genetic and gonadal sex of the child. Thus it has occurred in the past that some children with this type of hermaphroditism have been assigned as girls, some as boys. When the phallus is so small as to be of clitoral dimensions, it is undoubtedly the wise decision to assign the baby as a girl. The first stage of feminizing genital surgery is done at the time of birth, with perhaps a second, vaginal stage necessary when the body is full grown. At the age of puberty, a feminine body morphology is induced by treatment with female sex hormone. When all ambiguity is settled anatomically and in the minds of the parents once and forever, at an

early age, then one normally expects that the gender identity will differentiate as a female.

Unfortunately, there has often been far too much procrastination in resolving ambiguity, especially when the external organs look unmasculine and no testes can be palpated at first. Not only may the sex be reannounced in the early weeks or months, but when older, a child may be forced into a sex reassignment by edict—in a few instances with even a subsequent second reassignment by request. The gender identity and/or general psychologic health are then usually unstable.

It is possible also for a female gender identity to differentiate, even when the phallus is large enough to appear to the girl who grows up with it not as a clitoris, but a small penis. I have seen three such patients. In these cases, the gender identity must surmount the hurdle of the masculine body image during childhood, an even bigger hurdle after pubertal development of physique emerges as masculine, and the hurdle of an erotic arousal pattern that is more masculine than feminine in its threshold (though not its imagery).

The hurdle may become insurmountable if the contradiction of the body morphology is reinforced by uncertainty on the part of the parents as to the authenticity of the sex of assignment, and if ambiguity is further augmented by the comments and teasing of other children. For example, it has been not too uncommon in the past for parents to be told that they will have to wait until puberty before the true sex declares itself and they can be certain about their hermaphrodite child. This uncertainty is readily transmissible to a child, whether openly or subtly, thereby imposing on the child both the freedom and the necessity of resolving the quandary one way or the other. Such a child may well harbor the conviction in the middle to late childhood years that the whole world is wrong and that she really should be a boy. She will eventually reach the point of decision and want to be reassigned with surgical reconstruction as a boy and given male hormonal therapy, if needed. There are four such cases in my series. The pendulum of indecision may be swung, in some instances, by self-awareness of interest in rough play and aggressive self-assertion; by large feet and hands and tall body build; by failure of feminine pubertal signs to appear, even though masculinization may be weak; and by erotic arousal under the stimulus of other females perceptually or in imagination and dreams.

It is possible that there may be some cases of male cryptorchid, hypospadiac hermaphrodites reared as girls who wonder about a sex reassignment, even without a visibly masculine ambiguity of the genitals as a stimulus.

In three such cases I have seen, the sex of the child was never settled unequivocally for the parents. No surgical correction as a female was undertaken, and no female hormonal treatment to induce a female instead of a male puberty at the proper time. Additionally, the children

were mostly left trapped in silence, not knowing what to expect from the future and unable to clarify their doubts.

The most theoretically provocative cases of male cryptorchid, hypospadiac hermaphroditism are those in which the assignment and rearing are as a girl, but not the gender identity. When an older patient of this type decides to effect a sex reassignment, prior to or after medical and surgical help, one may be tempted to say that a basic, biologic masculinity is forcing its way out. Yet, the fact is that such a reassignment, because it seems totally justifiable to a physician once he has established the chromosomal and gonadal sex, is given strong encouragement. Further, such a case tends to become more widely publicized than its counterpart.

The counterpart is a female hermaphrodite, also with an hypospadiac phallus, also assigned as a girl and wishing also to be reassigned as a boy. In the absence of a proper diagnostic work-up at birth, such a female hermaphrodite, who is visibly indistinguishable neonatally from a cryptorchid hypospadiac male hermaphrodite, will have been more often assigned as a girl, on the criteria of having no palpable testes, than a boy. Once the diagnosis of chromosomal and gonadal sex have subsequently been correctly established, this girl is likely to have her request for sex reassignment as a boy rejected. Many physicians will interpret it as unjustifiable and will press the patient into hormonal and surgical feminization instead. Feminizing is technically easier than masculinizing and usually produces a better result with fewer operative problems. Therefore it tends to attract less attention or publicity.

The antithesis of the female hermaphrodite living as a girl, and wanting to be reassigned as a boy, is the male hermaphrodite living as a boy and wanting to be reassigned as a girl. Especially if he has virtually complete agenesis of the phallus and an unmasculine body build, his request is likely to be honored. The very difficulty of surgical masculinization in his case works in his favor. However, such a case is rare, since the birth assignment would probably have been as a female, in the first place.

There is another occasion when a favorable response to a request for sex reassignment from boy to girl is likely to be given, namely, when the request comes from a patient whose proper diagnosis was not established at the time of original assignment as a boy, but was later discovered to be female hermaphroditism. This case of a female hermaphrodite wishing to be reassigned from male to female is the true antithesis of the male hermaphrodite living as a female and wanting to be reassigned as a male. The frequency incidence is less, however, most probably because female hermaphrodites are not too frequently assigned as males, even when the accurate diagnosis is not established neonatally. The reason is that any ambiguous-looking hermaphrodite without a

palpable testis is less likely to be assigned at birth as a male than a female.

Despite the logic of the foregoing, the possibility should not be dismissed that male cryptorchid hypospadiac hermaphrodites may seek a sex reassignment more often than female hermaphrodites do—probably more often in the direction from female to male than from male to female which also occurs. There is too much sampling bias in any presently available statistics, however, and too much attention to outstanding and dramatic cases. What is needed is regional census. Until then, no properly valid conclusion can be reached. If more male than female hermaphrodites do, in fact, seek sex reassignment, then the situation would parallel that of anatomically normal transsexuals where the male to female ratio is between four and six to one, according to various estimates. There appears to be more risk in the establishment of a unitary gender identity in the genetic male than the genetic female.

Penile Agenesis

Very rarely, a genetic male baby is born with a penis so small that it is actually little larger than a clitoris. The defect lies not in the placement of the urethral canal, as in hypospadias, but in the miniature size of the organ and the missing spongy tissue of the corpora cavernosa in the body of the penis. The testes also are likely to be small, imperfectly formed, incompletely descended, and inadequately functional at the age of puberty.

In some, though not all of these children, the local application of testosterone ointment will bring about a premature enlargement of the penis in infancy and childhood, in anticipation of the enlargement normally expected at puberty. In teenage, when the rest of the body develops, the penis again looks comparatively small.

The grave difficulty, for a boy, of having to grow up with a completely insufficient penis is such that a baby with this deformity is sometimes assigned to the female sex, given the first stage of surgical feminization of the genitalia soon after birth, and brought up as a girl. A feminine puberty is guaranteed by substitution therapy with female sex hormone and, when the body is full grown, an artificial vagina is constructed.

In childhood, these girls, of whom I have seen five, differentiate psychosexually as girls. In some instances there is a tomboyish amount of physical energy expenditure. It is too soon to report on what happens in their erotic life and imagination after puberty.

I have also known of six patients with penile agenesis assigned and living as boys. One of them I have been able to follow regularly from infancy until he is now in middle teenage. Psychosexually he is very much a male, with a certain amount of virile exaggeration in girlfriend and dating relationships, by way of compensatory determination to meet the challenge.

At the age of ten, this boy began to drift away from boys' pursuits

and to join more with a small group of boys in the girls' play groups. He disclosed that he had been privately ruminating on the idea of whether it might not be better for him to be a girl. He had read in the newspaper of a case illustrating the possibility of sex change. His decision would be contingent, however, on whether or not the change could be so effective as to allow of procreation as a female. He heard that the answer was no. He also heard, for the first time, of the possibility of the local use of testosterone ointment to get a penis of a size that he would be less ashamed to expose in the presence of other boys. Then his decision was spontaneous—he preferred staying a boy. Thenceforth, his attentiveness to girlish pastimes ceased. He reaffirmed his allegiance to things masculine. Over the years he was greatly helped by frank sex education, especially by advice concerning erotic technique and prosthetic devices with which he could expect to find help in solving the problem of his penile inadequacy. This case is particularly instructive because of the transparency with which it shows the origin of a transsexual theme in childhood, which is the period to which most transsexuals attribute the onset of their condition.

Penile Injury and Penectomy

It is not extremely unusual for a normal man, or even a growing boy to lose his penis through injury or as a necessary result of surgery. But, it is very unusual for the same to happen to a newborn or very young infant. There are sometimes errors in circumcision, but only once have I been able to follow a case where the entire penis was lost as a sequel to a circumcision accident. The accident occurred at age seven months. Nothing whatsoever of the penis remained. The parents, having learned through television of the postoperative success of a transsexual life, reached a decision that their baby should better be raised as a girl than a boy. The change of name and clothing was effected at the age of nineteen months and the first operative repair at twenty-two months. It is still too soon to report on psychosexual differentiation.

Gender Identity Error

Transsexualism

In many of the foregoing examples, there was a discrepancy between assigned sex and gender identity with a desire for sex reassignment. In all these cases, a discrepancy could be found between assigned sex and one or more of the somatic variables of sex. This discrepancy makes possible, in the minds of many people, a justification of the sex reassignment request. In contrast to hermaphroditic transsexualism, there is no such ready justification available in the case of eonistic transsexualism (eonism) which is the syndrome referred to in the title of this book.

In eonistic transsexualism, there is no known discrepancy between the sex assigned at birth, and the appearance of the external genitals.

Typically, also, there is no discrepancy between assigned sex and the other measurable somatic criteria of sex. This is not to say that transsexuals are physiologically and morphologically all identical, but simply that the vast majority fall within the limits of normal variation. A very few may have a chromosome abnormality, notably the 44+XXY syndrome in male transsexuals, but the majority show no chromosomal deviance. Similarly, though a few may show hormonal imbalance, excess, or deficiency, the majority remain within the normal range of hormonal production.

One necessary qualification to be added to these findings of somatic normalcy is that they are based on today's tests and methods of measurement. Tomorrow may require a revision. For example, in being able to count the chromosomes, one does not know anything about the genes or the genetic code contained in each one of those chromosomes. It is perfectly possible that there is, in transsexualism, a peculiarity in the genetic code which, while not directly and inevitably producing a transsexual, makes it easier for an infant and child to differentiate psychosexually as such a person.

Analogously, it is possible that some as yet unknown fetal hormonal factor influences the fetal nervous system in such a way as to increase the chances that transsexualism will evolve, perhaps in association with or response to some other developmental event, in the course of psychosexual differentiation. There may be some significance, here, to be found in the fact that the vast majority of sex reassignment requests in hermaphrodites (as indicated in the foregoing sections of this chapter) are from living as a female to a male, and that they are made by individuals who were masculinized, albeit imperfectly, in utero, irrespective of genetic sex. The inference of a fetal masculinizing effect is further supported by a tendency toward lesbian thoughts and bisexual desires in virilized female, adrenogenital hermaphrodites. The counterpart of effeminate desires in a male hermaphrodite with a small, unfinished penis occurs, but is apparently less common. However, one may not draw the inference too far, since babies with masculine-looking, though unfinished external genitalia, regardless of genetic sex, are precisely those around whom lingers the most frequent and prolonged unresolved ambiguity regarding the sex of assignment. They are also those who, if genetic and gonadal males, are likely to have their incipient requests encouraged and acceded to.

In the present state of knowledge, the only sensible way to conceptualize the etiology of transsexualism is as the end product of the process of psychosexual differentiation which may begin to go awry at different times in the course of its developmental history, not at some fixed point alone. The process begins when the chromosomes of the egg and sperm unite. It continues, incipiently, during the fetal events of sexual differentiation. Its period of maximum development is after

birth, especially in the early years. During this time, psychosexual differentiation is particularly responsive to and depends upon social stimulation and interaction. The special events, if any, upon which a transsexual gender identity is contingent cannot at the present time be specified. Nor can it be specified whether certain infants or children are more likely candidates to develop as transsexuals than others, given the appropriate contingencies in the social history. The similarity of transsexuals with respect to various personality traits, and their difference in personality (according to preliminary, unanalysed observations) from the majority of hermaphrodites who desire a sex reassignment, suggests that transsexuals do constitute a special neuropsychologic and personality type, irrespective of their transsexualism.

SUMMARY

The frequency of sex-reassignment requests in hermaphroditism varies with the different hermaphroditic syndromes. They are not very common. When the genitalia look normal and agree with assigned sex, sex reassignment is not requested, regardless of other hidden disparities of sex. The majority of individuals requesting reassignment have been exposed to ambiguity in bodily appearance and social attitude, or both. Many individuals tolerate these ambiguities, however, and develop a gender identity congruent with their assigned sex—though not necessarily with their genetic or gonadal sex.

More hermaphrodites request a change from living as a female to a male than vice versa, regardless of whether the gonadal diagnosis is male, female, or true hermaphroditism. This statistic reflects a tendency to assign babies with hermaphroditic, unfinished sex organs, including an organ which could be a large clitoris or an imperfect penis, to the female sex, provided a full diagnostic work-up is not done. It also reflects a tendency, now old-fashioned, to leave morphologic incongruity uncorrected during childhood. Nonetheless, the possibility remains that the presence of a sufficient amount of male sex hormone at a critical time in fetal life will, regardless of genetic sex, predispose to masculinism in psychosexual differentiation later in life, provided other postnatal contingencies conspire in the same direction.

The greater frequency of sex-reassignment requests in genetic male than female hermaphrodites may have a parallel in the greater number of sex-reassignment requests in male than female transsexuals, who are morphologically normal. Here the similarity ends, however, for the majority of the hermaphrodites want to change from female to male.

Sex-reassignment applicants who are hermaphrodites do not show the same consistency of personality type as do morphologically normal transsexuals. There may be some neuropsychologic trait or pattern common to most transsexuals which is of etiologic importance to their condition.

CHAPTER 6

SEXUAL DIMORPHISM AND DISSOCIATION IN THE PSYCHOLOGY OF MALE TRANSSEXUALS

John Money, Ph.D.,
and Clay Primrose

Introduction and Purpose

A masculine or feminine gender identity is a global concept or entity which has to be analyzed into components. These components then can be used as cumulative indicators of an individual's psychosexual status or gender identity.

Valid tests presently available do not provide such analysis, as they assess the degree of conformity to a prescribed social stereotype of the male or female role but bypass the more subtle psychological traits and erotic indicators of gender identity. Interviews, utilizing various types of open-ended questions, are often more reliable in this respect and must be relied upon, at least until more sophisticated tests are developed, in gathering the kind of complex information reported in this chapter. The purpose of the chapter is to put on record information regarding various components of feminine gender identity in male transsexuals as revealed in interviews and on the M-F scale of the Guilford-Zimmerman Temperament Survey.

Sample Selection

The sample consists of fourteen cases of male transsexualism which had been fully worked up and were on file in the psychohormonal research unit of The Johns Hopkins Hospital (Table 1) as of August, 1967. Two of the cases had not yet had surgery; twelve had completed surgery.[1] Eight of the completed operations were performed at Johns

[1] In clinical practice we always refer to patients in the feminine grammatic gender after they have begun to live full-time in the female role. In this paper, however, the clarity of meaning has been improved by using mostly the male pronouns.

Hopkins. Four other patients, originally operated elsewhere, (Naples, Copenhagen, and Juarez, Mexico), needed vaginal surgery at Johns Hopkins, including two cases requiring complete vaginal construction for the first time.

Two patients, one preoperative and one postoperative, had not been taking estrogen at the time of the original psychologic work-up. The others were, in effect, functionally castrated by estrogen therapy at the time they gave preoperative information about erotic functioning. Duration of estrogen therapy as well as other features of the sample are also recorded in Table 1.

PROCEDURE

The data for this study were abstracted from the patient's files and entered into flow charts for comparative evaluation. All the patients had been first seen sometime within the past three years, except one who was seen as long ago as six years.

At the time of the initial work-up, patients were given a battery of tests and were interviewed over a three-day period, or longer, prior to selection for surgery. The schedule of topics covered is listed as an appendix to this chapter. Follow-up interviews were conducted during hospitalization and postoperatively when possible. Two researchers were chiefly responsible for administering tests and interviews, while another participated intermittently. Test scores from the Guilford-Zimmerman Temperament Survey's masculinity-femininity scale were extracted from the test records.

The interviews had been constructed to cover specific areas of investigation of which five were examined for this paper: physical expression of aggression in childhood, genitopelvic functioning, imagery during masturbation and/or sexual intercourse, evidence of a penis phantom postoperatively, and degrees of maternalistic feeling.

MASCULINITY-FEMININITY SCALE

The M-F scale of the Guilford-Zimmerman Temperament Survey has been standardized to discriminate between the sexes. The true-false questions involve behavior patterns which are traditionally sex-differentiated, as the following sample indicates:

You would like to go hunting with a rifle for wild game.
You can look at snakes without shuddering.
You would rather study mathematics and science than literature and music.
You would rather be a forest ranger than a dress designer.
The sight of an unshaven man disgusts you.
When you become emotional you come to the point of tears.

Table 2 shows that in every one of the cases tested, the male transsexuals scored lower on masculinity than 90 percent of the normal male

Table 1
Descriptive Data of the Sample (N = 14)

Patient Number	Age at Interview	Age at 1st Stage Surgery	Time Lapse Since Penis Operation[1]	Duration of Estrogen Treatment		IQ	Comments
				Pre-op	Prior to Interview		
1	34	34	8 mos.	5 yr.	4 yr.	99	
2	27	27	15 mos.	3 yr.	3 yr.	106	
3	24	25	9 mos.	1 yr.	0 yr.	83	
4	48	38	12 yr.	1 yr.	11 yr.	129	First stage[2] abroad; vaginal repair JHH
5	29	29	14 mos.	3 yr.	3 yr.	108	
6	30	29	2 yr.	0 yr.	1 yr.	120	First stage abroad; vagina JHH
7	46	41	10 yr.	0 yr.	5 yr.	134	First stage abroad; vagina JHH
8	31	31	12 mos.	2 yr.	1 yr.	130	
9	24	24	7 mos.	2 yr.	1 yr.	114	
10	30	28	3 yr.	1 yr.	3 yr.	115	First stage abroad; vaginal repair JHH
11	26	26	2½ yr.	2 yr.	2 yr.	102	
12	23	23	4 mos.	2½ yr.	1 yr.	112	
13	22	—	—	4 mos.	0 yr.	131	Awaiting surgery
14	19	—	—	1 yr.	1 yr.	—	Awaiting surgery
MEAN	29.5 yr.	29.7 yr.	34 mos.	1.7 yr.	2.6 yr.	114	
MEDIAN	28 yr.	28.5 yr.	14.5 mos.	1.5 yr.	1.5 yr.	114	
RANGE	19–48 yr.	23–41 yr.	4 mos.–12 yr.	0–5 yr.	0–11 yr	83–134	

[1] Until the end of 1967.
[2] First stage surgery refers to gonadectomy and penectomy.

Table 2
Distribution of M-F Ranking (Guilford-Zimmerman) According to Male and Female Norms (N = 11)

Centile Rank	Masculine Scale	Feminine Scale
0–1	7	0
2–5	3	0
6–10	1	0
11–20	0	1
21–40	0	1
41–60	0	2
61–70	0	1
71–80	0	0
81–90	0	1
91–95	0	1
96–100	0	4

standardization population. Seven out of eleven scored more feminine than 60 percent of the normal female standardization population.

The results of this test indicate a high degree of verbal adherence to feminine stereotypes on the part of male transsexuals. However, adherence to stereotypic female behavior norms is not an indicator of all aspects of the psychosexual state, but may be in part the result of a conscious, superficial imitation of female behavior which transsexuals do remarkably well.[1]

[1] The use of the voice is a good case in point. Many male transsexuals are able to talk, without being face-to-face, as on the telephone, when visual clues as a guide to the listener are missing, and not be called mister, even when the person on the other end of the connection is a stranger. This achievement is all the more remarkable, because the anatomy and physiology of voice production in the adult male is not changed by either castration or female hormone administration. Hormonal masculinization, normally occurring at puberty, changes the voice by developing the larynx so that internally the vocal chords are enlarged and externally the Adam's apple becomes prominent. Neither of these changes is hormonally reversible. Thus, if a female is treated with male sex hormone (for example, in the control of breast cancer), or if her own body overproduces androgen, then her voice becomes permanently deep and masculine. Some women get voice deepening with age, others as a sequel to an androgen-producing tumor. Women who are female hermaphrodites as a result of overactive adrenocortical glands used to have deep masculine voices in the days before prevention with cortisone therapy was discovered. Some of these women could not adapt to pitching their voices higher and were always mistaken as men. Others did manage to establish a husky manner of speaking, with little use of the lower registers of their vocal capacity, so that they were seldom mistaken as men.

The majority of male transsexuals are able to effect a transformation of their voices so that they neglect the lower registers in favor of the higher. They may gain further feminine effect by means of a whispery huskiness or by means of a slight lisp. They may also increase the effect still further by the subtle use of feminine cadences and modulations of vocal speed, to which are added feminine idioms and emotional vocalizations. When to all of this is added the effect of feminine facial postures and speaking gestures, including gestures of the arms, it is possible to create so complete a feminine effect that the listener does not question the sex of the speaker. It is accepted that she is vocally a woman.

The sexual dimorphism of voice is illustrated with dramatic impact in transvestites who alternate from their male to female personalities, and in transsexuals who are observed longitudinally while they make the transition into their complete

Physical Expression of Aggression

In the popular mind, the physical expression of aggressiveness is a definitely male characteristic. Studies of primate species support this concept in that male primates exhibit more physical assertion of dominance than females (Harlow, 1962). DeVore (as quoted by Hamburg and Lunde, 1966), describing the male monkey, explained rough-and-tumble play as actual practice for aggressive behavior later in life. Similar sex differences in aggressive behavior patterns have been observed by Sears in human children by the age of three (Mischel, 1966).

The physical assertion of dominance may be accomplished in at least three ways: Actual fighting is the most direct and unequivocal method; energy expenditure in competitive physical sports is another assertive measure; and even calisthenics or prescribed physical exercise may provide an opportunity to assert dominance through the expression of physical strength.

The interviews were examined for evidence of the inclination or the ability to engage in physical activities, including fighting, through which aggression might be expressed.

Invariably, the male transsexual patients recalled an aversion to fighting, to boys' competitive games, and to rough, outdoor activities. Labeled "sissy" by their peers, they much preferred the security of the home and little girl activities.

The word "sissy" is an important clue to transsexual childhood behavior, since our information was all retrospective. In the world of little boys this inclusive word covers appearance, demeanor, interests, and game preferences which are less-than-manly. Such labeling implies, categorically, an absence of the desire physically to assert dominance in a male group of children.

Male aggressive behavior patterns may be among the sexually dimorphic traits that are determined in fetal life, according to newly

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feminine role full-time. In these cases it is possible to record the two voices on tape, so that the differences are permanently available for comparison and analysis.

The female transsexual who changes to live as a male may, before hormonal treatment, modulate her voice so as to maximize the use of the lower tones; but she is at a disadvantage when compared with her male counterpart, since she does not have the bass notes in her vocal repertoire that compare with his falsetto tones. By contrast, she is at a very distinct advantage with respect to hormonal treatment. Androgens change her vocal anatomy, just as they do that of a pubertal boy. The change to a true masculine voice is very convincing and greatly facilitates her acceptance as a male.

The androgenized female transsexual may be further helped by the appearance of an Adam's apple. For the male, this organ may be a cosmetic grievance that sends him to a plastic surgeon to have it reduced. The operation is delicate and requires the hands of an expert if the vocal chords are not to be damaged. The scar, if there is a residual one, or the size of the unoperated Adam's apple, may be the only clue to the diagnosis of a transsexual in social life, even to the eye of a medical expert—so complete is the remainder of the transformation and impersonation.

emerging experimental evidence. Reviews of this work by Harris (1964), Young, Goy, and Phoenix (1964), Money (1965), Gorski (1966), and Hamburg and Lunde (1966) implicated fetal androgen in the hypothalamus as the male differentiating factor, an absence of which produces female differentiation of both the neurohumoral basis of pituitary cycling—at least in the lower species—and of associated procreative behavior. Female differentiation is dependent upon the absence of androgen, not the presence of estrogen.

With regard to human behavior, the experimental species of greatest interest is the rhesus monkey. Phoenix (1966) reported the influence of prenatal androgens on sex-related behavioral differentiation in the rhesus monkey in studies at the Oregon Regional Primate Center. By injecting androgens into the pregnant mother, it was possible to obtain female offspring with ovaries, uterus, and tubes internally, but with total external masculinization, namely a penis and empty scrotum. Such an animal, during childhood, is observed to exhibit rough-and-tumble play and assertive dominance with a frequency approaching that of the normal control male more closely than the normal control female. In the sexual play of childhood, the experimental animal also exhibits more behavior typical of the normal male than the female. Postpubertal behavior has not yet been reported.

Human beings appear more susceptible than the lower species to social learning processes in the acquisition of specific behavior patterns. It is, therefore, possible that exposure of hypothalamic cells to androgen at a critical fetal age would produce a more subtle influence on the central nervous system which creates a predisposition for learning aggressive behavior patterns. Thus, the presence or absence of androgen or other hormone in specific amounts during early critical periods may have a long-term subsequent influence.

A study of progestin-induced hermaphroditism (Ehrhardt and Money, 1967) in ten girls is suggestive of such effects. The girls had all been exposed in utero to an excess of androgens induced by a synthetic progestin given the mother to prevent miscarriage. Nine of the ten girls grew up as tomboys with masculine preference in toys, games, and athletics, while having minimal concern for feminine frills, doll play, or household chores. There was, however, no clear evidence of masculinity in the erotic sense of actual or incipient lesbianism. Psychosexual identity was not reversed, and seven of the girls anticipated marriage and having children, although in some cases this was secondary to career ambitions.

Bandura, as quoted by Mischel (1966), claimed that although boys and girls are similar in their knowledge of sexually dimorphic behavior, including the expression of aggression, their performances are sex-determined by male or female models to which they differentially attend. This is a theory of identification, and one which is difficult to prove con-

clusively. It disregards the possibility of simple cognizance as a means of acquiring information on behavior patterns of the opposite sex which might, in fact, be established on the basis of fetal neurohumoral influences and not as a product of identification.

In summary, aggressive behavior patterns and psychosexual differentiation may be related either to prenatal exposure to certain hormones at critical periods, or to as yet undetectable hormonal factors, or exclusively to social learning and identification processes. Most likely, it is dependent on the interaction of all three. Whatever the actual genesis may be, the lack of physical expression of aggression in the childhood of male transsexuals is discrepant with their genetic and anatomical gender.

Genitopelvic Functioning

Love play and other behavior attendant upon and including the copulatory act is sexually dimorphic. Males are considered to be alert to sexual conquests, easily aroused, and prone to the initiation of sexual activity. The female stereotype is passive and accepting, more slowly aroused, less prone to the initiation of sexual activity, and able to gain satisfaction from pleasing the partner.

The origin of this dimorphism lies in the physical fact that, for fertilization alone, the male must have and hold an erection, while the female need only be receptive. Penile erection is a more difficult variable in coitus than the passive receptivity of the vagina. Despite this difference, it is not legitimate to generalize too broadly, labeling male sexual behavior aggressive and female behavior passive. The female copulatory role also permits of extremely active participation. The popular notions and stereotypes of behavior are frequently violated in everyday heterosexual relationships. In the case of the male transsexual, however, it would appear that his conception of sexually dichotomous behavior is defined in conformity with the stereotypes, not their violations.

In the course of the present investigation, erection in the male transsexual was examined as a primary trait of normal male sexual function. Patients were questioned about their genitopelvic functioning, kinds of sexual experience, and feelings concerning their own genitals. Postoperative patients who had engaged in coitus as women were asked about their vaginal sexual experience, sensations, and orgasm.

The male transsexuals invariably chose the receptor role in sexual relations. Direct stimulation of the penis was unpleasant and undesired; sexual receptiveness was not always accompanied by erection of the penis or other evidence of responsivity of erotic tissue. Whether the dysfunction of the male genitals may be attributed to psychodynamic factors and/or treatment with estrogen, in no case was there regret at playing a receptor role only. On the contrary, there was delight in it as a symbol of femininity.

Every male transsexual in the sample reported a definite dislike for his own genitals (Table 3). During sex play or coition, attempts were always made to disregard or cover the genitals, minimizing any attention focused on the incongruous organs.

Table 3
Genitopelvic Functioning (N = 14)

Patient Number	Attitude Toward Genitals	Preoperative		Erection While Insertee	Postoperative	
		Insertor	Anal Insertee		Coitus	Orgasm
1	Negative	No	Yes	Rare	Yes	Yes
2	Negative	No	Yes	No	Yes	Yes
3	Negative	No	Yes	Yes	No	No
4	Negative	No	No male partner	No	Yes	(see text)
5	Negative	No	Yes	No	No report	No report
6	Negative	No	Yes	No	No	Still healing
7	Negative	Infrequent with wife	No male partner	No	No	Untested
8	Negative	Infrequent with wife	No male partner	No	No	Untested
9	Negative	No	Interfemoral only	No	No	Untested
10	Negative	Infrequent with wife	No male partner	No	No	Untested
11	Negative	No	Yes	Rare	Yes	Yes
12	Negative	No	Interfemoral only	Yes	No	Still healing
13	Negative	No	Yes	Yes	Awaiting surgery	
14	Negative	No	Yes	No	Awaiting surgery	

Eight of the eleven patients who were not married as men and who had had sexual relations, preoperatively, had participated only with another male. They participated in anal intercourse exclusively as the insertees. Two others employed the technique of interfemoral intercourse as the insertee and occasionally practiced fellatio, and the eleventh patient reported no preoperative experience. Those who preferred anal intercourse also reported an occasional incidence of fellatio, but never a preference for it. Except for the three patients who had an episode of being married as a male, there was no incidence of coital insertion of the transsexuals' own penis into any orifice of the partner's anatomy.

Nine of the fourteen had no erections after preoperative estrogen treatment, even during intercourse. None of the patients expressed any regret at the functional loss of his penis in erection and ejaculation through hormone treatment. In the other five patients, erections were infrequent or absent; ejaculations were rare, and the experience was described as unpleasant and undesired.

Four patients reported orgasm postsurgically. It was of full intensity, similar to orgasm in the pretreated, masculine state in three of the patients. They were receiving hormonal treatment not with estrogen alone, but also with a synthetic progestin, of the type that is, in bio-

chemical structure, actually an androgen. The fourth patient was being treated on estrogen alone. Her climactic feeling appeared, by her description, to be more of a spreading warm glow, than an intense, spasmodic pulsating, and she did not discharge any fluid from the urethra, as did the other three. For her, this same feeling could be triggered by breast as well as genital-area stimulation.

The functional castration of estrogen treatment is an excellent test in advance to determine how a patient will react to the loss of his genitals. Whereas the transsexual is pleased with his loss of masculine capability, the man with prostatic cancer treated with estrogen will regret his loss of libido and may request its return by periodic remission of therapy in order to regain enough potency to have intercourse. In these men the hormonal castration does not extinguish the desire to be able to use the penis again for sexual satisfaction.

The fact that the transsexuals did not want to have an erection and did not regret losing the responsivity of the penis does not unequivocally indicate femininity. Rather, it indicates, in part, a personal conception of being feminine in conformity with a popular stereotype. In a large proportion of the cases, the men had not even the experience of intercourse with a woman on which to base their conceptions of feminine sexuality. They were, therefore, forced to create their own image of the female copulatory role from other more indirect sources of information. This image was accompanied by appropriate alterations of neuropsychologic functioning which made erections and insertion rare, as well as unwanted. Erotic stimulation in the male genitals was displaced by the pleasure of giving satisfaction to the partner through receiving his penis rectally, interfemorally or, less often, orally.

The question is raised as to which claims precedence, the created image of feminine sexual function, or the change in neuropsychologic functioning. The transsexual's image of the female copulatory role may have instigated involuntary neuropsychologic dysfunction. Conversely, the inability to function as a male may have stimulated the creation of a female image.

So great is the transsexual's satisfaction with the female coital role after hormonal therapy and surgery, that the heretofore perfunctory attitude toward the occurrence or nonoccurrence of sexual orgasm is replaced by the appreciation and warmth of sexual satisfaction. Orgasm reappears and is claimed to be more gratifying than ever before, with all the dissonance of masculinity successfully dispersed.

Masturbation and Intercourse Imagery

Little is known in psychology concerning sexual dimorphism in erotic imagery and the incidence of imagery in erotic arousal and copulatory function. Imagery may be classified into four types: perceptual stimulus images, memory or recalled images, dream images, and creative

fantasy images. Of the four, creative fantasy images are the most pertinent to the present study.

Though no empirical norms exist, it is the generally accepted principle that males, more than females, are responsive to and dependent upon visual and narrative stimulation for genitopelvic arousal. Women may be romantically and sentimentally aroused by visual and narrative material, but they are more dependent than men on the sense of touch for genitopelvic, copulatory arousal. As a possible gauge of their femininity, information was obtained from the group of male transsexuals concerning the function and content of erotic fantasy imagery (Table 4).

Table 4
Content and Occurence of Erotic Imagery (N = 14)

Patient Number	Sex of Partner	See Self As Woman	See Self with Vagina	See Self with Breasts	See Self with ♀ Hair	Comment
1	Male	No	No	No	No	No imagery
2	Male	Yes	Yes	Yes	Yes	
3	Male	Yes	Yes	Yes	Yes	
4	None	No	No	No	No	No masturbation or sex
5	Male	Yes	No	No	Yes	
6	Male	Yes	Yes	Yes	Yes	
7	Female	Yes	Yes	Yes	Yes	Married as male briefly
8	Female	Yes	Yes	Yes	Yes	Married as male briefly
9	None	No	No	No	No	Masturbation or sex infrequent
10	Female	Yes	Yes	No	Yes	Married as male briefly
11	Male	Yes	Yes	Yes	Yes	
12	Male	No	No	No	No	No imagery
13	Male	No	No	No	No	No imagery
14	—	—	—	—	—	Information still to be obtained

Two of the thirteen cases available for study had had little or no masturbatory or coital experience and were unable to provide information. Three other cases reported no imagery at all. Of the eight remaining cases, three had been married as males for at least a short period of time.

With the exception of the three patients who had been married as males, the patients had had no sexual experience with females. Their sexual relations were with male partners whom they considered to be primarily heterosexual and erotically masculine—and justifiably so, if we judge by the partners whom we have interviewed.

Each of the eight patients experiencing imagery preoperatively during anal intercourse as insertee, or while copulating with the wife as a man, imagined himself as a woman during love play and copulation. Six patients visualized themselves with full female characteristics, that is,

a vagina, large breasts, long hair, and a feminine body contour. The remaining two patients saw themselves as females, but could not see complete feminine genitalia. In no case was there conscious recognition and acceptance of the patient's own genitals during masturbatory or copulatory activities.

There is a dissociative quality to the male transsexual's disengagement of genitopelvic erotic functioning and his engagement of feminine imagery-content, while having sexual relations. As in hysterical dissociations, such as conversion blindness or conversion paralysis, neural and neuropsychologic functioning are altered so that there appears to be no regret at the dysfunction or loss, namely, insensitivity in the normal center of erotic stimulation, the penis.

Content-analysis of imagery indicates that visual fantasy completes the dissociation from the male gender by replacing the disregarded male genitals in the imagination with female organs. An example of the erotic arousal power of this fantasy transformation was particularly well indicated in the report of one of the patients who was married as a male. He reported that successful achievement of intercourse was dependent upon his ability to disregard his penis. He was aroused only when in his imagination his wife had the penis and he had the vagina. The strong dissociative mechanism here illustrated in male transsexualism may indeed be basic to an explanation of the phenomenon of transsexualism.

Just as there are no norms for the sexually dimorphic content of imagery, there also are no empirical norms for a sex difference in the actual presence of imagery, regardless of content. However, relying on anecdotal evidence, one considers responsivity to visual imagery, either immediate or in the memory, which affects genitopelvic arousal, a male characteristic. By contrast, during copulation, it is unusual for the normal male to remain reliant on the image. Rather, he loses himself in concentration on tactile and proprioceptive stimulation. A similarity with the transsexual exists in the homosexual attempting heterosexual intercourse when he must imagine another male as his partner. A parallel but more common example is that of the normal male who, bored with his partner, imagines during copulation a more desirable and erotically enticing partner with him.

Full achievement in sexual intercourse results from a total immersion and complete absorption in bodily sensation. Hindered by dependency on visual-image stimuli, the male transsexual is not able to surrender to the pure sensation of the body. In this respect he is not typically male in copulatory response. By the same token, he is not female, either.

Penis Phantom

Amputees often experience the presence of the amputated limb. It may itch or hurt, and pain in the nonexistent limb may be severe. This

phantom limb phenomenon can be partially explained in neurological terms, but its occurrence or nonoccurrence seems to be more a function of individual personality factors.

Owing to the highly sensitive nature of the normal male penis, one might assume that phantom limb sensations are likely to occur after its amputation (Money, 1960). When possible, the male transsexuals were asked the day after surgery, and again later whether they had had any feeling or experience that the penis was still there. Only one patient reported sensations which might conceivably be interpreted as those of a phantom penis. This patient said that, upon urinating the first time postsurgically, there was a burning sensation where the penis had originally been. No such subsequent experiences were reported by the patient.

Postoperative phantom limb sensations indicate that a neurologically functional limb existed prior to surgery. The absence of any penile sensation following amputation may be the result of previous dissociation of function. Evidence of aberrant genitopelvic functioning in the male transsexual before surgery supports this hypothesis. The penis sometimes did not function as erotically normal even before estrogen treatment. Neither this dysfunction nor the functionally castrating effect of female hormones caused any regret on the part of the male transsexuals. The penis was no longer the center of erotic stimulation and, therefore, was expendable. The disregard of penile eroticism represents an inhibition of functioning sustained by the feminine gender identity. This inhibition would also preclude the occurrence of phantom limb sensations.

MATERNALISM

On the basis of their ability to lactate, mammalian females are phylogenetically responsible for at least a large part of the immediate postnatal nurturance of their offspring. The behavior of nurturing an infant is independent of lactation and it can occur in the male (Rosenblatt, 1967). In animals it can be induced experimentally by brain stimulation of the male. Nonetheless, nurturant behavior is, typically, more of a maternal than a paternal trait in mammals generally and in the primates in particular. In the female of the human species, it is a special mark of maternalism that she, more than the male, is strongly responsive to the tiny helplessness of the newborn. For this reason, the male transsexuals were questioned for evidence of maternalistic feelings. They were asked if they ever had had pregnancy dreams or fantasies, had envied pregnant women, or had ever thought of adopting a child and, if so, what the preferred age of the child at adoption would be.

In the twelve cases where information was available, only one described fantasies of pregnancy or wishes to have a baby. None of the patients expressed any persistent envy of pregnant women; however, all

twelve definitely wished to adopt children. In ten of these twelve, the preference was for small children ranging from one to five years old, rather than newborn babies.

In general, it appears that the typical male transsexual does not possess the maternalism associated with the female of the species. Pregnancy is not an important goal or desire in their lives. Far more important for the transsexual is the achievement of being accepted as a woman. The desire to adopt children occurs as a reinforcement of the new-found womanhood. The preference for toddlers instead of tiny babies may be interpreted as comparable to owning a fashionable pet as a female status symbol. It is not the same as the compelling urge of the normal female to have her own newborn baby to care for.

A woman may do an excellent job of caring for a fashionable pet. So also a postoperative transsexual, married as a female, may do an excellent job of mothering an adopted or foster child, perhaps even a neonate. Our conclusion is not that the transsexual is poor at mothering, but simply that maternal responses as evoked by the newborn baby are not the same in the transsexual male as in the typical, normal female.

Discussion

The foregoing findings suggest that male transsexuals possess a female gender identity, but with certain special features. These special features do not appear to be personalized or eccentric, but widely typical of the syndrome. By most people's standards, the male transsexual's overt behavior is characteristically feminine, though often highly exaggerated to conform more closely to the current or social stereotype of femininity. Transsexuals in the present sample are distinguishable from females at large by their lack of special attraction to the helpless newborn and their imagery in coital fantasies. Since they read extensively about themselves and are subject to the Hawthorne effect, transsexuals in future samples may have a changed conception of the female stereotype.

Etiological explanations of transsexualism have been hampered by misconceptions about processes of psychosexual differentiation. The process of achieving a complete gender identity is a developmental progression, beginning with genetic foundations and terminating with social learning. A weakness or maldevelopment at any one stage of the progression need not directly induce a specific defect in the final identity. It does, however, introduce an instability in the structure, making each subsequent developmental level more vulnerable to defect.

The final product of psychosexual differentiation is not written in the genetic code, thenceforth slowly and inexorably to express itself. The occasional coexistence of Klinefelter's (44+XXY) syndrome and transvestism suggests a possible parallelism between cytogenetic and psychosexual ambiguity (Money and Pollitt, 1964). It is conceivable that the

coincidence of two such rare syndromes indicates that in the XXY chromosome anomaly, transsexualism is likely to occur more often than by chance. The genetic code of patients with Klinefelter's syndrome may create a population at risk for defective psychosexual differentiation accompanying the redundant X chromosome without actually being determined by it. If such is the case, then the developmental social and/or physical environment necessary for the psychosexual defect to be realized is not yet adequately understood.

Evidence of the subordination of genetic foundations to postnatal environmental effects is most apparent in cases when hermaphroditic individuals raised in one sex are matched by those of identical diagnosis raised in the other sex (Money, 1963). In such cases, each individual of the parallel pair typically differentiates psychosexually in concordance with the assigned sex. These findings indicate that in such cases of congenital deformity, the child at birth is psychosexually neutral. There is no good reason not to suppose that all members of the human race begin life psychosexually undifferentiated, but with variable vulnerability to defective differentiation, determined on the basis of different genetic and intrauterine histories.

Psychosexual identity is not inexorably determined by intrauterine or fetal hormonal history any more than by genetics alone. The example of matched hermaphrodites is pertinent in this context also. Regardless of identical hormonal histories, different psychosexual identity may be successfully achieved according to the assigned sex of each child.

Evidence of a fetal hormonal factor failing to be the final determinant of psychosexual identification is offered by studies of progestin-induced hermaphroditism in girls (Ehrhardt and Money, 1967). These girls had been exposed to an excess of masculinizing hormones in utero (see above). During childhood they appeared more tomboyish than normal girls, but in no case was there evidence of a psychosexual reversal or desire for sex reassignment.

There remains a great deal still to be learned about the residual effects of fetal hormonal history. Allowing that vulnerability to error in the achievement of normal psychosexual identity may be created by early hormone exposure, then it is possible that some of the uncanny clinical similarities of transsexuals may be due to the consistent nature of an as yet unknown fetal hormonal event.

It is within the bounds of possibility that such a hormonal event might render transsexuals different with regard to hypothalamic organization. The low expenditure of physical energy in the expression of aggression on the part of male transsexuals hints at hypothalamic alteration. Animal experiments have shown that, in the rat, copulatory motivation, like that of feeding, is apparently operated by a mechanism which maintains balance between excitatory and inhibitory centers in the hypothalamic region (Lisk, 1967); and that the integrative organiza-

tion of copulatory response is dependent, at least in part, on hormone-dependent neuronal systems located in the hypothalamic region. Within the same set of systems lies the mechanism which appears to be most important for regulating estrous behavior to the appropriate pituitary gonadotropic phase in the ovulatory cycle. The cyclical nature of female sexual functioning is a key sex difference in animals ranging from lower estrous to primate menstrual species, and it is possible that in the primates, as well as the lower estrous species, sex-hormonal and sex-behavioral cycles are hypothalamically regulated in synchrony.

Investigation of the origin and regulation of the activating and inhibiting mechanisms in the hypothalamus and elsewhere in the human brain still remains to be undertaken. In the future, it may be found that a theory of neural inhibition can be extended to include a faulty postnatal inhibitory mechanism in transsexuals which allows opposite-sex behavior patterns, including those built up through social learning, to be activated.

The activation of dormant, sexually dimorphic behavior was demonstrated experimentally in the rat by Fisher (1966). Male sexual behavior was elicited from either male or female animals. Fisher injected sodium testosterone sulfate directly through a microcanula implanted in the midlateral preoptic region of the hypothalamus. Similar implants of testosterone in the medial preoptic region produced maternal-like behavior. Again, the effect was obtained in either male or female animals.

The differentiation of one gender identity instead of the other may follow a paradigm not unlike that of the development of the internal sexual morphology (Money and Ehrhardt, 1968). Two separate anatomic systems exist, the wolffian and the mullerian, both of which are intact early in embryonic development. Under hormonal influence, one system proliferates, at a critical point in development, into the functional organs of one sex, and the other regresses to a vestigial state. The correct balance is not always maintained, as in the sexual ambiguity of hermaphroditism where both systems may appear in an incomplete form. An analogous ambiguity in psychosexual differentiation might result in sexual deviations such as homosexuality, transvestism, or more rarely, transsexualism.

In the world of a growing child, both male and female systems of behavior exist as models, carrying a positive or negative valence according to the sex of the child's rearing. Whatever may be the possible unlearned assistance from constitutional sources, the child's psychosexual identity is not written, unlearned, in the genetic code, the hormonal system, or the nervous system at birth. The child becomes conditioned to adhere to the positive model which is the one congruous with his rearing and, in the normal course of events, consistent with his anatomy. The opposite or negative-valence model becomes a constant reminder of how one should *not* act. This opposite-sex model does exist in the

brain as a neurocognitional entity which under specific circumstances, developmental, experimental, or pathological, has the possibility of becoming operational. Transsexualism is perhaps the most intense and dramatic example of the embodiment of this possibility.

There are some cases of transsexualism in which one can observe the operation of the two models—positive and negative, male or female—or, rather, the patient's version of them. In what are probably only rare cases, the two models may be activated in alternating episodes of short duration. Each is identified by a separate name, as in one case, Marylou and Robert. In this case, Marylou went into a kind of staring trance when she was questioned about Robert's sex-reassignment operation, which was taboo knowledge for her. From the trance Robert emerged, with his different, deep-pitched speaking voice and his more down-to-earth ways. Marylou was coy and demure. She was gradually taking over. Robert believed that she would soon displace him completely.

The trance-like phenomenon ushering in an alternation of personality is not common among transsexuals who, by the very nature of their condition, usually stabilize as full-time members of their reassigned sex. Nontranssexual transvestites more frequently alternate their egos, episodically, along with their clothes. One such patient would take on his alternate personality, Pattie, in a kind of metamorphosis from Jack to Pattie as he sat before the mirror while dressing and applying make-up.

A great many transsexuals claim that they have always had only one personality, namely, the feminine one, for as long as they can remember. Usually there is no one to dispute them—no one who observed them sufficiently closely over the years to be able to detect and report a personality change. Occasionally, one has the chance to follow a transsexual over the years. We have one patient in whom the feminine personality appeared only episodically at first, and not when the patient was dressed in boys' clothes which was, by family edict, most of the time. Over a period of three years, Tommy, also known as Kelvin, phased out as Kathryn, now old enough to be independent of family, established herself on a full-time basis, completely sure that she would eventually get surgically transformed. Kathryn had a different speaking voice than Tommy, more high-pitched and with a minimal lisp. She was also different in demeanor, being more languid and tender in nature.

There are reports in the literature to indicate that, occasionally, a change of personality toward transvestism may occur in conjunction with the development of temporal lobe seizures (Epstein, 1961). In one case, the change was reversed by a temporal lobectomy which got rid of both the seizures and the transvestism.

This case is a reminder that, in the absence of seizures, one does not yet know anything of the neurophysiology of the phenomenon of multiple personality, or of the emergence of an alternate personality, as in

transsexualism or transvestism. It is there, however, in neurophysiology as well as neuropsychology, that the answer will one day be found to lie.

The male transsexual is able to live, work, think and make love as a woman. His female personality is, in part, his conception of those traits and behavior patterns which typically constitute femininity. This assimilation of traits does not create a less genuine or less stable female personality. It simply excludes traits such as an urge to fondle the newborn and erotic arousal not by visual and narrative stimuli but by touch, because they are normally outside male experience and comprehension. The male transsexual conforms to the conception of femininity he has assimilated, until by most standards, his personality becomes *her* personality, female, and completely dissociated from male identity.

SUMMARY

Fourteen cases of male transsexualism were studied with respect to certain sexually dimorphic behavior patterns. Twelve of them had completed surgery and the remaining two were awaiting surgery. The patients were given a battery of tests and were interviewed over a three-day period. Masculinity-femininity test scores indicated a high degree of verbal adherence to feminine stereotypes. Interview questions revealed that the patients had been labeled as "sissies" during childhood. Following puberty, they chose the receptor role in sexual relations, often disregarding their genitals completely. Preoperatively, five patients visualized themselves as females while having sexual relations as anal insertees, and three others while copulating as men with their wives. Postsurgically, none experienced phantom sensations where the penis had been. All fourteen patients desired adoptive motherhood, with a preference for small children, though not newborn babies. In general, the group appeared to possess a feminine gender identity, except for a masculine threshold of erotic arousal in response to visual imagery and an unmotherly disengagement from the helplessness of the newborn.

APPENDIX TO CHAPTER 6

INTERVIEW SCHEDULES

Schedule of Procedures for Sex Reassignment (Transsexual) Cases

Wechsler Adult Intelligence Scale
Bender Visual-Motor Gestalt Test
Guilford-Zimmerman Temperament Survey (300 items)
Cornell Index (Form N2) (101 items)
Draw-A-Person Test
  I. Draw a person
  II. Draw a person of the opposite sex
  III. Draw yourself and a friend
  IV. Draw your family
Sacks Sentence Completion Test (60 incomplete sentences)
TAT (Thematic Apperception Test)
  Cards: 7BM
  3BM
  6BM
  13MF
  8BM
  16 (Blank)
Ten-minute speech sample (for psycholinguistic research)
Interviews
  1. Sex History and Function
  2. Personal Life Data and Function
  3. Past History: Birth, Health, School, etc.
  4. Oblique Inquiry Techniques
Interview with lover or spouse
  cf interview schedules one and three above
  Personal attitudes and reactions to patient's sex reassignment
Interview with parents or next of kin
  cf interview schedule three above
  Personal attitudes and reactions to patient's sex reassignment
Photographs
  Medical
  Personal
Electroencephalogram
Genetic lab studies—chromosomal and blood
Genetic Interview

Physical Examination
Hospital and Physician Insurance Data
Financial Arrangements Information
Police Clearance

PAST HISTORY: BIRTH, HEALTH, SCHOOL, ETC.
(FOR USE WITH PATIENT, PARENTS AND OTHER INFORMANTS)

Ordinal position plus birthdates of siblings
Age of parents: birth and marriage dates
Pregnancy and birth history of patient
Childhood illnesses
Developmental habits (childhood onward)
  eating
  sleeping-waking
  toilet training
  enuresis and encopresis
  tantrums
  phobias
  obsessions
  stealing
  irrational behavior
  delinquency
  "funny" habits:
    nail biting
    thumb sucking
    head banging
    rocking
    hair twisting, etc.
  play habits:
    dramatics
    mothers and fathers
    mother's or father's occupation
    doctors
    pregnancy
    wedding
    physical energy, athletic play, sports, etc.
  hallucinations and delusions
Psychosexual differentiation, history of
Pubertal History
Family relationships
  all persons in the household
  absent kin
  family's reaction to patient's condition
  sleeping arrangements
School history
Friendship history
Vocational history
Hobby and recreational history
Military status and service
Police history
Genetic history
  similar cases in immediate family and kinship family
Health history and hospital career
Previous "mental testing"

where
dates
Referral physician and address
Other doctors in patient's history

PERSONAL LIFE DATA AND FUNCTION
(FOR USE WITH PATIENT)

Sex History and Function (see separate schedule)
Religion and moral conceptions
Philosophy of life
Family, household and kinship dynamics (patient's version)
Heroes and idols
Supernatural and uncanny experiences
Course of a specific, typical day

SEX HISTORY AND FUNCTION
(FOR USE WITH PATIENT FOR PRE- AND POSTOPERATIVE STUDY:
AND ALSO, SELECTIVELY, WITH LOVER OR SPOUSE)

Knowledge of condition and causal explanation
Transsexualism
  First feeling of wanting to be a girl (boy)
  First awareness that sex reassignment surgery available
  Surgery decision made
Expectation of treatment
Sex education and information
Early sex history: curiosity, theories, investigations, play
Masturbation
Masturbation fantasies
Erotic and romantic daydreams
Dating, petting and love-making
Homosexuality; other paraphilias
Cross-dressing
  First experience
  History
  Present activities
  When total living/working as a woman (man) began
Names: female, male; name changes and associated personalities; nicknames
Motherliness and child-care ambitions
Marriage, separation, divorce; offspring; future plans
Menstruation: date by landmark, e.g., class, birthday; pregnancies;
  substitute menses (in males)
Hormones, dosage history, erotic effects
Orgasm relative to
  hormone history (exact dosages)
  pre- and postoperative history
Erotic zones and orgasm; special attention to breasts
Perceptual arousal stimuli and history of changes with treatment, if any
Sleep Dreams
  Love dream (including intercourse)
  Climax dreams
  Dressing-up dreams
  Wedding dreams
  Pregnancy dreams
  Mothering dreams

Nightmares
Other dreams
Body image, clothed and nude, in dreams and daydreams
Body image, clothed and nude, relative to orgasm
masturbation fantasies
intercourse fantasies
Fetishistic use of clothing, erotically
Masturbation (mirror?)
Intercourse: who initiates it? techniques and positions; prostheses
Phantom phenomenon (postoperative)
Physique and Secondary Sexual Features
Height
Weight
Hips
Breasts
Beard, including electrolysis and hormone effects
Voice, on telephone and face to face talking
After Surgery
Physical feelings
Emotional changes
Temperature changes; hot flashes; sweating
Castration effects and hormonal control
Was it worth it?
Advice to others

OBLIQUE INQUIRY TECHNIQUE

Three wishes game
Alone; shipwrecked; choose whom?
If I had $100,000 . . .
If I had ten years to live . . .
If I were invisible . . .
The cause of my condition is . . .
If I were an animal, I'd be a . . . Why?
If I could change just one thing about myself . . .
The first thing I remember . . .
The earliest thing I remember . . .
Other early memories
Self description for a penfriend
Looking back, age seventy
Myself ten years from now, and how it happened
Advising young parents how to rear children; give sex education, etc.
Advising medical student on own case
Game of reversing roles of patient and interviewer
Pygmalion game: statue comes to life, asks how, when, why of a number of emotions
Define: Good (bad) personality
Define, for a friend: Psychiatrist
Make up a daydream, eyes closed
Free-association game: like turning on a radio; all the messages

CHAPTER 7

SEXUAL DIMORPHISM IN THE PSYCHOLOGY OF FEMALE TRANSSEXUALS

John Money, Ph.D., and
John G. Brennan, B.A. (Hons.)

This chapter is a sequel to the preceding one, and is concerned with six female patients who were convinced they should be males and, therefore, wanted to become as male-like as possible. It reports information obtained in interviews and on the M-F scale of the Guilford-Zimmerman Temperament Survey regarding various components of gender identity.

Sample Selection

The sample comprises six of the seven cases on file in the psychohormonal research unit of The Johns Hopkins Hospital. The seventh case (seen many years ago and untreated) was excluded as it lacked sufficient information germane to the present study. Data for the six cases are summarized in Table 1. All were self-referred to this hospital.

Four of these patients originally presented themselves untreated, two had begun male-hormone treatment elsewhere, of whom one already had a mastectomy. Five have now had a mastectomy, of whom four have had a hysterectomy which was also undergone by the sixth patient. Three patients have followed through with attempted construction of an artificial penis, with varying degrees of success. Of the remaining three who have not begun surgery for an artificial penis, one is awaiting the solution of family problems, the second one may consider it at a later date when the surgical outcome can be more precisely predicted, and the third one lives in a foreign country, where he had returned five years ago, before phalloplasty as a transsexual procedure was introduced. This patient was first seen twelve years ago and followed until six years ago. The other five patients have been seen and followed within the last six years and remain under continued follow-up.

Table 1
Descriptive Data of the Sample (N = 6)

Patient Number	1	2	3	4	5	6
First seen	5–24–62	2–23–65	10–6–65	1–11–56	5–26–65	4–11–67
Last seen	3–27–67	7–21–67	4–4–68	3–9–62	2–5–68	4–3–67
Postoperative follow-up	42 mo.	30 mo.	29 mo.	22 mo.	27 mo.	4 mo.
Verbal IQ	91	125	99	118	126	133
Performance IQ	106	116	102	120	114	124
Full scale IQ	97	122	100	120	122	131
Age when assessed	26 yr.	36 yr.	31 yr.	25 yr.	48 yr.	31 yr.
Birthdate	9–18–36	1–2–29	9–2–34	10–2–31	10–13–17	4–11–36
Male hormone therapy, preop.	2 yr.	8 yr.	18 mo.	none	2 yr.	pending
Mastectomy	Sep. '65	1962[1]	Dec. '65	June '60 March '62[2]	Nov. '65	pending
Hysterectomy	Nov. '66	Apr. '65	Oct. '67	not done	March '65	Dec. '67
Phalloplasty	yes	yes	yes	no	no	no
Full time status as male	1965	1958	1968	1960	1963	pending
Change over	rapid transition	approx. episodically gradual	graduated transition	rapid transition	episodically gradual	pending

[1] Done in New York City.
[2] Done in two stages.

PROCEDURE

Data for this paper were abstracted from files and test protocols and entered on flow charts for comparison and assessment. Patients were examined before, during, and after their operations. Follow-up interviews were scheduled to coincide with return surgical-clinic appointments, except for patients who lived within commuting distance. The work-up on the earliest case was less extensive than on the more recent five cases, as the full schedule of inquiry had not been developed at that earlier time. These five each had tests and interviews that were usually administered during a three-day period of evaluation prior to the decision to recommend for or against surgery. Twelve interviewers and testers were involved over the years, and one of these (Money) saw all of the patients. The schedule of interview topics and tests is given in the appendix of the report by Money and Primrose (Chapter 6).

Each patient's file provided data on a wide range of topics. In conformity with the first investigation, their assessment was made under the following headings: M-F scale; physical expression of aggression in childhood; genitopelvic erotic functioning; imagery during masturbation and sexual intercourse; phantom breast and womb; and degree of parentalism.

MASCULINITY-FEMININITY SCALE

Traditionally, behavior is sex differentiated within the family unit and in the community at large. Agents of society, parents, teachers, ministers, mass media, and playmates provide the contingencies by which

the child is conditioned. At a theoretical level, this process is well documented by Riesman, Glazer and Denney (1950). Attempts to measure with questionnaires the effectiveness of the process of conditioning of some aspects of the gender role have included the M-F (Masculinity-Femininity) Scale of the Guilford-Zimmerman Temperament Survey. The M-F questions tap the degree to which a subject is prepared to commit himself or herself to the acceptance of a stereotype; they involve a choice between allegedly typical male and female activities.

Table 2 shows that the five female transsexuals who were given the Guilford-Zimmerman M-F test scored high for masculine stereotypical behavior. Compared with normal women, they were among the least feminine, in the tenth percentile range, four of the five being between the first and fifth percentiles, indicating lack of femininity. This measure of socially established behavior patterns shows that these five women, when compared with other women, were conforming to male roles as they perceived them. It is a weakness of this test that it is so constructed that a woman's low feminine (high masculine) score is not the exact reciprocal of a man's high masculine (low feminine) score and vice versa. Thus, as compared to normal males, only two patients obtained an average rating for masculinity. The other three were rated less male-like in their responses than the normal male. One was below the twentieth percentile and two below the fortieth percentile.

Analysis of some of the individual items of the M-F scale suggests that some are doubtful measures of masculinity versus femininity, for example, "You feel deeply sorry for a mistreated horse." A negative answer is given a masculine rating. In terms of American traditional reliance on the horse it is unlikely that all men, cowboys, trainers and grooms for instance, would answer no. A humanitarian frame of reference would give a "yes" and therefore rate more feminine. This would exclude males with humanitarian attitudes. All five patients gave a yes answer and so lowered their rating as male. Even so, the results of the

Table 2
Distribution of M-F Rankings (Guilford-Zimmerman) in Transsexual Females (N = 5)

Centile Rankings	Masculine Scale[1]	Feminine Scale[1]
0–1	0	1
2–5	0	3
6–10	0	1
11–20	1	0
21–40	2	0
41–60	2	0
60–100	0	0

[1] On the men's scale, a ranking of one is least masculine (= most feminine) and one hundred indicates the most masculine (= least feminine). The obverse is true for the women's scale.

test are, over all, in keeping with other evidence of faulty gender identity in transsexualism.

It would seem that transsexual females adhere to verbally expressed masculine stereotypes and to this extent may be considered to have male attitude patterns. The degree to which their conscious awareness of male behavior may be a superficial imitation versus ingrained habit is another question.

Physical Expression of Aggression

Parents show less toleration for aggressive behavior from their daughters than for aggressive behavior from sons. Whether phylogenetically derived or not, society's expectations are sex-typed; the male is expected to be the aggressor. Like femininity, aggression may be expressed in many ways. Fighting is most commonly the meaning associated with the term, aggression, but a variety of other behavior may be included. Excessive expenditure of energy, especially in playing games such as cowboys and soldiers which involve the use of toy guns, swords, and other male accouterments may also be considered indexes of aggression. Some of this type of energy expenditure appears akin to territoriality—the male's marking, roaming and defending of territory. This type of behavior is seen highly developed in various of the mammals lower than man in the phylogenetic scale, but also has its probable counterpart in man. Often the sum total of general energy expenditure effects dominance. The dominant male is the popular stereotype.

Dominance and aggressive behavior, one might expect, would show either more frequently or more strongly among the patients of this sample than among females at large. Therefore, the interviews were assessed with these and related findings in mind (Table 3).

Table 3
Male Identification—Behavior Patterns

Patient number	1	2	3	4	5	6
Energetic	very	very	very	very	very	very
Often fighting	yes	yes	yes	yes	no[1]	yes[2]
Considered tomboy	yes	yes	yes	yes[3]	yes	yes
Male buddies	yes	yes	yes	yes	yes	yes
Played boys' games	yes	yes	yes	yes	yes	yes
Boys' ambitions	yes	yes	yes	yes	yes	yes
Played with dolls	no	no	no	no	some	some
Disliked feminine attire	yes	yes	yes	yes	yes	yes
Male mannerisms	yes	yes	few	yes	yes	yes
Cross-dressed (at home)	yes	yes	no[4]	no	yes	yes
Cross-dressed (in public)	yes (preop.)	yes	no, but mannish style	no	yes (preop.)	except for work

[1] Fighting socially objectionable—considered rough child.
[2] Friendly wrestling with boys.
[3] Called "Cyclone" at 13 years.
[4] Perhaps twice only.

Without exception, all of the patients reported that, as girls, they were considered to be extremely active. Four often engaged in fighting, usually with boys; one reported wrestling with and often beating boys when she was aged thirteen to fourteen years. Only one did not engage in fighting at all. The reason she did not fight was because it was socially disapproved, even among boys. However, she was considered a very rough child. All were considered to be tomboys and played boys' games and five had boys' ambitions. Four disliked and claimed never to have played with dolls; two played with them, but were never really interested in doing so. As youngsters all were clearly different from their feminine counterparts. Further, their difference lay in the masculine direction of their behavior patterns, as their labeling of tomboy suggests. One patient was nicknamed "Cyclone" at thirteen years.

The nickname of "tomboy," like "sissy," is an important clue to the transsexual's childhood behavior. In girls, the attachment of the tomboy label implies that general behavior, appearance, demeanor, interests, game preferences, and childhood ambitions indicate boyish activity and dominance traits. If, in addition, such girls prefer males as "playmates" or "friends only," and see other girls in the same way boys do, then their dominance begins to take on the characteristics usually considered part of the male character. To the degree that these attitudes expressed such dominance, this sample of girls behaved in this way toward males. In short, the patients showed, as children, physical energy and modes of expressing it that typically are associated with the male stereotype. Possible origins for this are considered in the discussion.

Genitopelvic Erotic Functioning

Apart from the differences self-evident in the morphology of the genitalia, it is generally conceded that genitopelvic erotic functioning, especially as applied to erotic arousal, is not identical in the male and female. The Kinsey studies (1948, 1953) drew attention to the male's greater responsiveness to visual and narrative erotic stimulus material. The female is more dependent on the sense of touch. When she is aroused by visual or narrative images, her arousal may be described as romantic rather than genitopelvically sexual. She romantically longs for the presence and touch of her beloved rather than being propelled toward an immediate sexual release. The male, especially in adolescence, may find release in masturbation. Masturbation in the female is considerably less common. The male is, by and large, more actively assertive in taking the initiative to seek out a partner in sex. The female is more compliant and receptive.

Various relevant data on genitopelvic eroticism in the group of six transsexual females are listed in Table 4. Four of the six patients had had sufficient sexual experience with one or more female partners to

Table 4
Male-Female Elements in Sexual and Romantic Arousal Patterns

Patient number	1	2	3	4	5	6
Touch (self by others)	no	ambivalent	genitalia only	NE[4]	yes mutual	NE
Touch (others by self)	yes	yes	yes	NE	yes	NE
Breast arousal	negative	indifferent	no	NE	no	NE
Genitalia (touch of)	negative[1]	self-stimulation	mutual stimulation	NE	mutual stimulation	NE
Romantic arousal—sight of beloved	yes	yes	yes	yes	yes	NE
Romantic arousal—sight of other woman	yes	yes	no	yes	yes	yes
Genitopelvic arousal—sight of other woman	no	no	no	NE	no	NE
Romantic arousal—sight of pictures	no	yes	no	yes	no	no[3]
Smell of perfume	NA[2]	NA	yes	NA	yes	no
Smell of woman	NA	yes	no	NA	yes	no
Oral-genital arousal	yes	avoided	yes	NE	mutual	NE
Initiates sexual advance	yes	mutual	yes	NE	yes	NE
Assertive in establishing partnership	yes	yes	yes	NE	yes	NE

[1] Became unresponding if touched during sex-play.
[2] NA = Not ascertained.
[3] Movie or T.V. love scenes stimulate slightly, romantically only.
[4] NE = No experience.

be able to provide data on all relevant counts. The two others had, on the basis of moral and religious constraints, not had sexual relationships with a female partner.

The general pattern to emerge is that, though these transsexual females each reacted to other females as their erotic object choice, much of the style of their reactivity was like that usually expected in the reactivity of the female to the male.

As is usually the case with the female, for example, when they were erotically aroused by a visual stimulus, the arousal was romantic rather than frankly genitopelvic. If the stimulus was the sight of the beloved, then the arousal was quite likely to carry through to embracing and tactile arousal. If the stimulus was another beautiful woman, then the arousal became a sentimental and romantic desire, not for the stimulus, but for the viewer's own partner and loved one. Only two of the patients indicated that sexy pictures might stimulate them, but here again the stimulation was romantic rather than genitopelvic.

Five of the six patients reported masturbation; in one case it was of rare occurrence and in another, infrequent. The sixth patient claimed no interest at all.

With the beloved as partner, three of the patients were erotically responsive to smell: two to perfume and two to the smell of a woman. The predominant mode of arousal, however, was tactile and in the physical closeness of sexual activity itself. No erotic zone of the body was particularly preferred.

The breasts—the patient's own breasts—were erotically unimportant. Of the four patients experienced in sex with a partner, one was indifferent to breast stimulation and three actively opposed it. For two, it negated their sexual arousal.

The patient's own external genitalia were functional as a source of sexual pleasure and orgasm, but penetration of the vagina by a finger or any penis substitute was either intolerable or vigorously negated. Oral-genital contacts were practiced by three of the four patients who had sexual experience (Table 4), and avoided by the fourth. Apart from the one patient for whom all variations of sexual and sensual contact are important, the other two who admitted to oral-genital contact showed their avoidance of being touched themselves in that they tended to be the arouser rather than the arousee. One patient disliked having the genitalia touched manually by the partner and, in fact, became sexually unresponsive if touched there. Another patient was ambivalent, a third tolerant, and the fourth considered mutual manual stimulation of the genitals integral to sexual enjoyment.

One patient, who enjoyed mutual manual stimulation, reported an intensity of excitation in the clitoral area, implying that it was an erection equivalent. Another patient, the one who lost all responsiveness if touched on the breasts or genitals, claimed almost to imagine the existence of a penis when lying on the partner as in the coital position of a male. Both of these patients were the two who told of using an artificial penis in sexual intercourse. All of the patients liked to stimulate their partners, and envisaged themselves in the male's role, in this respect, even to the point of feeling able to satisfy a woman better than any male ever could.

Two of the six patients had attempted heterosexual intercourse, in each case only once. Each actively disliked the experience. In one case it was not completed; this patient was married, the only one in the series who had been married to a man.

The only sexual relationship these patients enjoyed, in the case of the four who had had experience with a partner, was with another woman. Invariably they had asserted themselves and taken the initiative in establishing a relationship. Although they had had up to five or six different partnerships over the years, each relationship had been one of fidelity. There was no casual promiscuity in the group. The relationships tended also to be harmonious, and not marred by personality maladjustment and emotional disturbance, except for severe work phobia in one case, No. 1, of several months duration.

Masturbation and Intercourse Imagery

Among people in general, the relationship of imagery to sexual performance is a topic that has been unjustifiably neglected in sexual studies. The available evidence is anecdotal rather than systematic. In general, it would appear that masturbation is frequently enhanced, if

not actually sustained by heterosexual imagery. In some instances, however, sexual participation in imagination may give way to concentration on the tactile sensations and proprioceptions of the masturbatory act itself. When sexual activity is with a partner instead of with self, concentration on the feelings, sensations, and perceptions of the act itself would seem to be the rule. There are some people, however, who succeed in sustaining a state of sufficient sexual arousal and ability to perform only by creating in imagination a situation different from the one they are in, perhaps with a partner different from the one beside them. Thus, a bored husband may conjure up an image of a sex-goddess he has coveted at work. A married homosexual or bisexual man may change, in his imagery, the body of his wife for that of an idealized male lover, and thereby be able to maintain his erection. Some transvestite and transsexual males have reported imagery, when they attempted to have heterosexual intercourse with a wife or girlfriend, in which the partner was endowed with a male body and the self with a female body.

In the present sample of female transsexuals, none had sustained a copulatory relationship with a male for a long enough period of time, nor recently enough, to be able to report on the presence or absence of the phenomenon of the reciprocal interchange of the image of self and partner. Among the four who were sexually experienced with a female partner, however, three reported that they had intercourse imagery of the self as a male. One also sometimes imagined the partner to be a

Table 5
Rejection of Femininity in Sexual Functioning

Patient Number	1	2	3	4	5	6
Reared as girl	yes	yes	yes	yes	yes	yes[1]
Onset of menses	16 yr. irregular	14 yr. irregular	14 yr.	15/16 yr.[2] irregular	12 yr.	12/13 yr. irregular
Periods	hated	disliked	disliked	indifferent	"outraged"	disliked
Masturbation	no	yes	yes	yes (rare)	yes	infrequent
Heterosexual relations	none	none	once incomplete	none	once disliked	none
Homosexual relations	yes	yes	yes	none	yes	none
Marriage as male	as male postop.	idea appeals	no	no	twice	no
Marriage as female	no	no	briefly—unconsummated	no	no	no
Frequency of intercourse	2–3 times weekly	"very active"	2–3 times weekly	none	daily preferred	NE[3]
Anticipation of motherhood	no	no	no	no	no	no
Anticipation of fatherhood	yes	no	vaguely	no	yes	yes
Anticipation of childbearing	no	no	no	no	no	no

[1] But allowed to wear boys' jeans and sweaters.
[2] Induced by endocrine therapy.
[3] NE = No experience.

different female than she really was. The fourth claimed to need no imagery of the self as a male. This patient had actually lived as a male, with legal and marital status as a male, for several years at the time of being interviewed. In two cases (Tables 5 and 6) the feeling of playing the male role and having a penis, and actually wearing an artificial penis, was necessary to the maintenance of sexual performance and erotic enjoyment. This point has already been mentioned in the preceding section.

Table 6 shows that the same tendency toward portrayal of the self in imagery as a male was present in masturbation fantasies, daydreams, and dreams. The patients saw an image of their bodies as male, without breasts and usually complete with penis. An important part of daydream imagery was deletion of the breasts. In the imagery of sleep dreams,

Table 6
Body Image and Self-Image

Patient number	1	2	3	4	5	6
Male appearance self-assessed	yes	yes	no	yes	at times yes	yes
Male appearance other-assessed	yes	yes	no	yes	yes	mannish woman
Wanted breasts removed	yes	yes	yes	yes	yes	yes
Wanted hysterectomy and cessation of menses	yes	yes	yes[1]	yes	yes	yes
Obtained hysterectomy	yes	yes	yes	no	yes	yes
Wanted masculine genitalia	yes	yes	yes[1]	not possible at the time	possibly later	yes
Used prosthesis	yes	no	yes	NE[6]	yes (rarely)	NE
Sensation of existence of penis	yes	NA[6]	yes	yes[2]	none reported	NE
Fetishistic dependence on clothes	no	no	no	no	no	no
Self-image	male in wrong body	male[3]	female[4]	male in wrong body	male in wrong body	male[5]
Masturbation imagery	no masturbation	male	male	NA	not needed	reported none
Intercourse imagery	male	male	male	NE	none: all sensation	never had intercourse
Daydream imagery	male	male	male	male	"no time for daydreams"	only about pretty girls
Dream imagery	male	both	male	NA	male	male

[1] Wanted initially, if necessary to obtain breast removal, later requested per se.
[2] Reaction from hormone taken to induce periods.
[3] Some ambivalence.
[4] But with male attitudes.
[5] Until breasts developed, then thought she was both sexes in the one body.
[6] NE = Not experienced.
NA = Not ascertained.

five patients reported that they were male, dressed as a male, acting as a male and making love as a male. One of these also dreamt sometimes of being a woman. Two of these four reported waking just before achieving a sexual climax. None reported a sexual climax while dreaming, as in the wet dream of the male.

None of the six patients gave evidence of a fetishistic dependency on male clothing as an adjunct to erotic arousal or performance. This negative finding is quite in contrast with the fetishistic dependency on female clothing that is a common trait in male transvestites and in some, but not all, male transsexuals.

As compared with their self-imagery, the actual appearance of these patients at the time of being interviewed was a function of the civil status they had assumed, the clothing they wore, the male hormonal treatment they may have had and the masculinizing surgery they may have undergone (Table 1). Two had lived as males before receiving hormone therapy and/or mastectomy. One of these subsequently obtained a phalloplasty. A third had received hormones, but not a mastectomy, when he obtained legal status as a male. He has since postponed genital surgery until he feels more satisfied with its long-term prognosis. A fourth made the social change concurrently with the early physical signs of hormonal virilization (beard, skin change and voice change); he then underwent, step by step, complete masculinizing surgery and, finally, obtained a change of legal status. A fifth patient made the social change gradually by subtle change of clothing style concurrently with hormonal virilization and the progressive stages of surgery, until the legal change symbolized the relinquishment of female status. The sixth patient is still living as a mannish woman, awaiting the resolution of family barriers to the onset of further treatment. So far she has had a hysterectomy, but no hormones or additional surgery.

In their own evaluations of themselves prior to hormonal intervention, four patients thought of themselves as masculine in physical appearance. Two of these might, perhaps, have been classed as hairy and slightly masculinized in physique. The other two—in fact all the other patients —appeared physically within normal female limits except to the extent that they were masculine in posture, gestures, demeanor and habits of sex-differentiated etiquette. One of the above four classified herself as both sexes in one body. Of the remaining two, one felt she was sometimes female and sometimes male in appearance, and the other recognized she appeared as a female (she was an exceptionally attractive appearing lesbian) with male attitudes.

All of the patients were of sufficiently sound judgment as to be able to recognize that morphologically and genetically they were not males.

Phantom Breast and Womb

The majority of girls look forward even with impatience, as puberty approaches, to getting their breasts and menses. A girl with a disturbed

gender identity, however, may be ambivalent, or overtly negative toward the insignia of femininity. Such was the case with the six transsexual patients (Tables 6 and 7). They all hated their breasts and found them as mortifying as does an adolescent boy with gynecomastia. They went to varying extremes to bind their breasts, in an attempt to appear flat-chested. Likewise, they went to varying extremes to prevent anyone from seeing or touching the breasts, including the partner during sexual relations (Table 4). In one case, the revulsion against the breasts was so great that in order to obtain their removal, the patient considered all other surgery a matter of expediency. Her one proviso was to first be rid of her breasts. This patient was different from the others only in the intensity of her phobia for her breasts and the intensity of the priority she gave to their removal. The other five patients were like her in giving precedence to flat-chestedness over cessation of menstruation, however much they were repelled by the idea of having to menstruate.

Table 7
Phantom Breast and Womb

Patient number	1	2	3	4	5	6
Revulsion against breasts	yes	yes	yes, extreme	yes	yes	yes
Binding of breasts	NA[1]	yes	no	no	yes	yes
Phantom breast	no	no	no	no	no	no
Revulsion against menses	yes	yes	yes	yes, indifferent	yes, outraged	yes
Phantom womb	no	no	no	unoperated	no	no

[1] NA = Not ascertained.

The strength of the revulsion against the breasts perhaps may be construed as a function of the visibility of these protuberances as a sign of femininity. The indignity of menstruation they could suffer in secret. Nonetheless, it is worthy of note that both female and male transsexuals have as their primary surgical goal the riddance of the offending protuberances, namely the breasts and the penis. It seems more important to them to get rid of this offensive evidence of their own sex, than to obtain the insignia of the other sex, as much as these also may be wanted. So strong is the urge to get rid of the offending organs, that, in some cases at least, one may put forward the hypothesis that the desire to live with the status of the other sex is a sequel to the female transsexual's desire to get rid of the evidence of her sex. This desire to change status would then represent a solution to the dilemma that might otherwise ensue.

Postsurgically, there was no letdown or regret at finally being rid of the breasts. None of the five patients who underwent the operation reported anything resembling a phantom phenomenon, either in the early postoperative period or later.

Four of the five patients for whom a hysterectomy has been performed were amenorrheal for months or years prior to surgery, on the basis of

androgenic therapy. Previously, they had had varied menstrual histories, with onsets retrospectively dated from ages 12 to 16 (Table 5). The incidence of late onset and irregularity of the menses is high. One patient had her first period hormonally induced at age 15 or 16. After hysterectomy, no patient of the four so operated regretted what had been done, not even the patient whose greatly distressing and somewhat florid symptoms of castration menopause went unrecognized and untreated for two months or more. This particular patient represents something of a test case, since her desire for phalloplasty was not as insistent as in the other two patients who underwent this procedure, which necessitates removal of the internal female organs. Further, she had reservations about subjecting her body to the disfigurement and scarring of incisions and extensive skin grafting. Despite her misgivings, this patient gave no indications of experiencing any internal sensations or feelings such as cramps, distendedness or contractions of the pelvic viscera that, for want of a better brief term, may be called a phantom womb. Nor did the other four hysterectomy patients give any such indications.

PARENTALISM

The difference between maternal and paternal drive, feeling and behavior is more a matter of scientific anecdotalism than of systematic study of its developmental origins in the nervous and endocrine systems. The evidence of animal experiments suggests that the brain is programed with basic maternal behavioral responsivity, regardless of genetic sex. The maternal patterns are suppressed in the male, perhaps as a result of masculine neurohumoral function during fetal differentiation. In the female, where no such fetal suppression takes place, the basic maternal patterns are able to express themselves, unless some later suppressive factor intervenes.

Maternalism is, indeed, a difficult variable to assess from interviews alone, without observation and a real life test. What there is to say about the six patients under review is, therefore, impressionistic and may need to be revised in the light of subsequent experience.

It is our impression that these patients were averse to pregnancy and the care and handling of the neonate and small infant rather than to young children per se. There was no opportunity to gauge their response to infants by direct observation. One of them had established housekeeping with, and eventually became married to, a woman who had disinherited herself from her family because of an illegitimate pregnancy. The patient was proud of the little girl who regarded him as daddy. His attentiveness to her was temporarily restricted by his own preoccupation with postoperative personality problems (phobic) which were unusually severe. On the whole his behavior toward the child probably would best be characterized as paternal rather than maternal.

Another patient had taken an active role as the godfather of an

orphan who was being raised by her grandparents. Now, in his second marriage, he and his wife have a baby by donor insemination. The remaining four patients can, perhaps, best be described as having been so much involved, at the time they were interviewed, in finding a solution to their own present problems, that they were distracted from any active interest in children and family.

Discussion

According to the clinical and laboratory criteria currently used, female transsexualism, as exemplified in the six cases here presented, is a condition that occurs in individuals who would otherwise be classed as normal females. The only physiological deviation from the normal, documented in four of the cases, was the reputed late onset of menstruation, but this phenomenon is more likely to be an effect rather than a cause of the psychosexual dilemma at adolescence.

Negative findings today do not rule out the possibility of positive findings tomorrow, on the basis of new techniques. The place to look for positive findings will unquestionably be the central nervous system. In particular, it will most likely be those nuclei of the hypothalamus and limbic system that regulate sexually dimorphic behavior. These nuclei well may have their own sexual dimorphism determined by hormonal events during fetal life in utero. The temporal lobe may also be involved.

Suggestive evidence of a fetal masculinizing effect on the brain is the finding of tomboyism in girls morphologically masculinized in fetal life by androgenizing sex hormones. There are two syndromes in question. One is the adrenogenital syndrome (Ehrhardt, Epstein and Money, 1968) in which the female fetus is masculinized by its own excess of adrenal androgens. The other is the syndrome of progestin-induced hermaphroditism (Ehrhardt and Money, 1967) in which the female fetus is masculinized by the occasional, indirect androgenic effect of synthetic progestins administered to the mother during pregnancy to prevent miscarriage and toxemia of pregnancy.

Tomboyishness in the progestin-induced and the adrenogenital syndromes is a matter chiefly of physical energy expenditure and outdoor athletic interests of the type customarily assigned to boys. Aggressive fighting and territoriality, while not excluded from this energy expenditure, was not a notable characteristic of it. There was no accompanying evidence of a predisposition to homosexual childhood sexual curiosity, play or intimacy, nor to lesbian eroticism in prepuberty or early adolescence. Maternal doll-play in childhood and anticipation of baby and child care in adulthood were both absent or weak.

This description of tomboyishness in childhood applies fairly well to what the transsexual patients reported of themselves, except that they grew up to discover they were lesbian oriented in their erotic disposition.

One may, therefore, legitimately pose the question of whether a tendency to tomboyish energy expenditure is not a primary trait in incipient female transsexuals, and one that somehow facilitates the subsequent differentiation of a transsexual gender identity, provided various prerequisite postnatal conditions (whatever they might ultimately prove to be) are encountered.

An alternative explanation might simply be that the transsexual female during childhood identifies with everything boyish, capitalizes on what is potentially boyish in every girl's makeup, and rejects everything that is consciously feminine. This type of explanation would appear to fit the finding of nonconformity to feminine stereotypes as measured by the M-F questionnaire. It would fit also the nonconformity to ideals of maternalism and the nurturing of babies.

Nonconformity to the feminine ideal was particularly evident in the present sample of patients, with respect to body image—primarily in abhorrence of the breasts, which took precedence over abhorrence of the menses. Female and male transsexuals resemble one another in wanting to be rid of a protruding reminder and morphologic stigma of their natal sex. The females differ from the males in being less offended by their genital organs. They may want the appearance of the male genitalia added, but without the relentless insistence with which the males want their male appearance removed. The equivalent demand in the females is removal of the breasts, which had never been wanted in the first place. Once the breasts are removed (and likewise the uterus) there is no regret and no experience of a phantom sensation.

Nonconformity to the feminine pattern does not extend to all aspects of eroticism and sex life. The transsexual patients tended to be like ordinary women in the following ways. They were romantically, rather than genitopelvically aroused, if at all, by visual sexual stimuli. They were dependent on the sense of touch for erotic arousal. Their sexual partnerships were not casual and promiscuous. When they had a history of more than one partnership, each one was a relationship of fidelity while it persisted. Masturbation was relatively unimportant in their sexual histories.

One may, perhaps, explain such conformity as femininity by default, since it is not popularly known and accepted that the traits involved are feminine rather than masculine. Even as this knowledge spreads, however, transsexual females may not change, since the various traits represent basic satisfactions, like the satisfaction of fidelity in love, which may be imperatives that cannot be denied.

The most economical conclusion to draw from all the foregoing is that female transsexualism is a disorder of psychosexual differentiation and is, regardless of its still unknown etiology, a psychologic manifestation. As in the case of male transsexualism, it may be characterized as dissociative in origin. It would appear that the phenomenon of dual

or alternating personalities, one male and one female, either does not occur or is more rare than in the male. A masculine psychosexual identity in the female transsexual differentiates early and keeps her feminine identity completely dissociated or in abeyance apparently permanently.

The rationale of the sex-reassignment procedure, hormonal and/or surgical, is, therefore, based on a psychologic criterion, namely the person's sense of sexual identity. It is essentially an ameliorative or palliative therapy. The evidence to date is that sex reassignment does, indeed, improve the human condition of the afflicted individual, by reducing cognitive dissonance between the knowledge of one's body morphology and one's gender identity. Its effect is quite specific, however, and does not extend beyond the reduction of cognitive dissonance. It does not automatically clear away other psychologic malfunctions—for example, depression, paranoia, or phobic anxieties and such like.

The sex-reassignment procedure is not only an individual therapy, but in a sense a social one also. It is a dramatic example, for the general public, of the seriousness of the gender-identity disorders. The very existence of so radical a procedure, as well as its newness, has helped, therefore, to change the social and legal climate regarding the "social-offender disorders" of sex. It will help to bring these disorders within the purview of science and medicine, where they belong, instead of under the jurisdiction of the police and prosecuting attorney. A discussion of the historical background to present-day opinion on sex may be found in the introduction to *Sex Errors of the Body* (Money, 1968).

If the law and its punishments could cure or curtail the sex-offender disorders, then they would have disappeared under the Inquisition, if not under the Roman law. If science and medicine are to solve the riddle of the etiology and treatment of these disorders, then scientists and physicians must organize a concerted research attack on them. The sex-reassignment procedure for transsexualism mobilizes the energies of many different specialists in research. Herein lies its true significance. Its promise to the future is that it will be responsible for those very discoveries by which sex reassignment will be displaced as superfluous.

SUMMARY

This report presents data on components of gender identity in six female transsexuals. They scored very low on femininity and fairly high on masculinity on the Guilford-Zimmerman M-F scale. In childhood they had no girlish interests. They were tomboys and prone to fight, usually with boys. Sensory and perceptual erotic arousal thresholds in adulthood conformed more to those of the female than the male, but the imagery of arousal and erotic performance was masculine. There was no fetishistic dependence on clothing for erotic arousal. The six patients were at various stages of hormonal and surgical reassignment

treatment. Five were living as males. A universal presenting symptom was hatred of the breasts. There was no evidence suggestive of phantom breast or womb in those who had received mastectomy and/or hysterectomy. None of the patients wanted anything to do with pregnancy and motherhood; parental feeling toward infants and children, insofar as it could be estimated, was fatherly rather than motherly.

CHAPTER 8

PARENTAL INFLUENCES IN MALE TRANSSEXUALISM

Robert J. Stoller, M.D.

Until recently no one has claimed special knowledge of the causes of transsexualism. Those who have not worked with transsexual patients have presumed that the condition is an expression of homosexuality or psychosis. On the other hand, some of those who had experience with transsexualism have believed it must have powerful genetic or hormonal biological roots because the commitment to a change of sex is so strong and often has started so early in childhood that no psychodynamic generalizations explain the clinical picture satisfactorily. Although this latter was for a time my impression also, I no longer believe that all transsexuals are what they are for the biological reasons frequently invoked.

I wish to begin my discussion by clearing away diagnostic debris and by better delineating the problem. In investigating the etiology of transsexualism, no progress can be made if the same diagnosis is applied to different types of people whose only similarity is their desire to change sex. It cannot be expected that the same set of criteria will be applicable invariably to every person seeking sex transformation. Let us, therefore, limit our discussion to only one group of people among those requesting sex change—the most feminine of males. As children, these people fantasy themselves female, dress as such whenever permitted, speak of their bodies becoming female in time, and take only female roles in fantasy as observed in their games. As adolescents and adults, they have so little capacity for expressing maleness and masculinity that they cannot use their penis with a woman (no matter what devices they employ, such as fetishism), do not become sexually excited by women's clothes, think of themselves as or wish to be females since earliest childhood, do not consider themselves homosexuals, do not seek notoriety that would publicize that they were males, and have no mocking quality that would make them appear effeminate rather than feminine. None has a demonstrable morphologic or biochemical defect of sex.

The cases to be discussed here are limited to those conforming with the above description. However, I have seen patients seeking sex transformation who did not have the above characteristics but who also were subject to the parental influences now to be described.

Almost all the information was revealed during evaluation interviews and no special techniques such as psychoanalysis or long-term psychotherapy were needed to permit their unfolding. However, more than half the subjects and their families have been in treatment, including psychoanalysis (one mother and her son), during which these findings have been corroborated and extended.

The nine consecutive cases to be presented here are not selected from a larger series, the only criteria for their inclusion being those listed above as characteristic of transsexuals. Their age range is four and a half to forty years. All nine have normal physical examinations, including normal male genitalia and for adolescents and adults, secondary sex characteristics. Selected examples of one child, one adolescent, and one adult picked at random revealed normal male sex chromosomes.

At the time they were first evaluated by me, five of the patients were five to six years old, one was fourteen, one was fifteen, one was nineteen, and one was forty.

The data obtained from this group of patients are summarized and supplemented by direct quotations from interviews to better illustrate the findings.

Figure 1 indicates that the mothers and fathers of male transsexuals are different from other mothers and fathers, and as a married team they

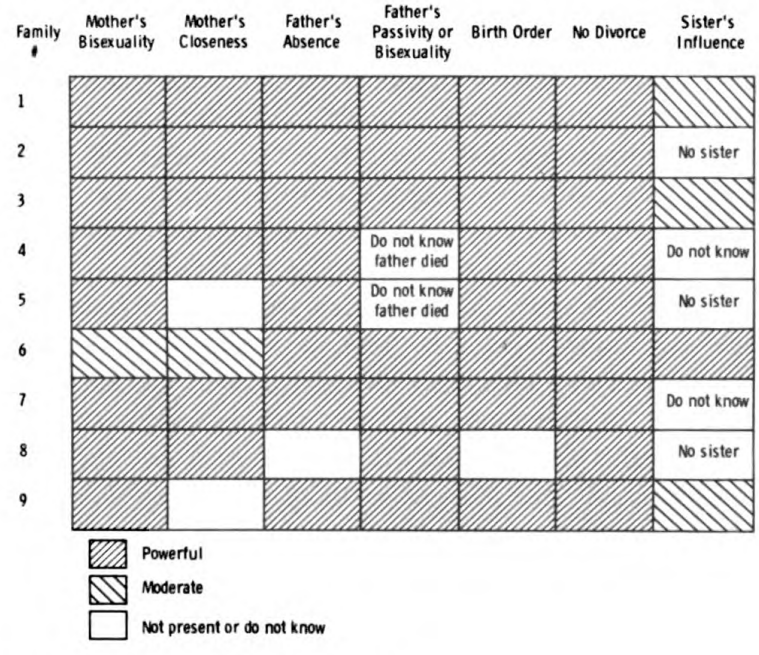

FIGURE 1. Family influences in transsexualism.

are different from other couples.[1] It seems that the parents primarily (and at times their daughters) impinge upon their infant son with a specific style that forces him to develop in a feminine way; it is the interplay of the listed factors rather than any one or two of them that seems essential for producing a transsexual identity.

It appears that transsexualism, starting in early childhood, may occur when a bisexual woman marries a passive man; as the years pass, the couple decides not to dissolve their empty marriage or even permit its weaknesses to show openly. The father can cope with his marriage and family only by being absent, at least during the infancy and childhood of his son; his wife survives by letting him be absent and by comforting herself in her life-long depression as well as in her present anguish by taking her infant son back in upon her body as a continuing comfort. Given this homeostasis, it will usually still be required that the son be the youngest child throughout his first few years so that his mother can concentrate totally upon him and thus augment the process by which her little boy identifies with her and her body so that he feels himself to be a female despite the evidence of his senses that he is anatomically a male.

DATA[2]

Mother's Bisexuality[3]

Case One. "I was a tomboy. I was very good at sports and I was highly competitive. I was as good as some of the boys—let's face it."

Case Two. "I never played with girls. I was quite a fighter. Not many people would hit me, not even boys. I ran everything—had my own football team and basketball team. This was a team of boys not

[1] It does not really say this last, for controls (other couples) are not included. Nonetheless, it should be evident that if I were to take any nine families without transsexual sons, the data reported (in this paper) would not show up as frequently.

[2] All are quotes of the mothers, unless otherwise indicated.

[3] In this section, I wish only to demonstrate those findings which reveal these mothers' similarity in competing as equals with males. In delineating this special kind of bisexuality, let these findings stand for other areas wherein these women are similar: their need, when girls, to dress in males' clothes; their never-ending, quiet hopelessness; their hated, unloving mothers who nonetheless now live only a few minutes away from them; a special drabness in appearance (easy to observe but which would take too many words to describe); absence of their need for heterosexual activity in adolescence with an associated easy virginity till marriage; and their passionless marriages without accompanying desire for (or rare fantasies of) extramarital affairs.

Unfortunately, "bisexuality" has so many meanings that one cannot know what an author is trying to say unless he tells us how he is using the word. It can mean anything from a combination of physiological or anatomical maleness and femaleness through practicing homosexuality to unconscious identifications with aspects of the opposite sex. My use of the word now has only that meaning given by the above observations.

girls. And if they didn't like it, they didn't get to play. I remember playing tackle football until I was around twelve. Baseball and softball. I played it up to high school, but I guess I changed then to playing with girls on girls' softball teams. I swam in competition. I did a lot of diving."

Case Three. (Notes dictated by her therapist, Dr. Alexander Rosen.) The mother on a number of occasions has described in some detail the tomboy activities she engaged in as a child. She reports, for example, that she was always a tomboy; she was always aggressive, not only as a child but as an adolescent and as an adult, frequently finding herself in the male role in school and work. She stresses she did not just take masculine jobs; she took men's jobs.

She played baseball, stickball, hockey, handball and was always an enthusiastic competitor in all sports. She was the pitcher on the girls' high school softball team. She always wanted to be a winner, had to be. As a child at the age of eight, she remembers playing Tarzan and Jane, and she was always Tarzan and some other girl was Jane. When thirteen she played with her father at the "father and son" baseball game, largely at her father's request. Her father taught her many masculine sports. He taught her to roller skate, jump rope, and play ball. Even now she feels herself competing in a masculine way. Only recently has she given up wearing man-tailored shirts and man-tailored slacks and this is primarily for her son's sake. Looking at the chronology it seems to me that the upsurge in masculine behavior occurred following the birth of her sister when "Mrs. Three" was seven years old. She feels she has never outgrown being a tomboy.

She described a photograph of herself with a Buster Brown haircut, her father's tie and hat, and a pair of shorts. Her father was putting her in a wagon—age six or seven. She says, "I looked like a boy."

Case Four. "I wanted to be a boy. I did everything a boy would do—played football, was the best football player, could clean up any boy in the neighborhood, could climb the highest tree, jump off the bridge into the river. Every boy I knew I could lick him. I was the leader of my gang."

Case Five. "I was boyish, I guess, probably more than my brother was. We did everything together. I was with boys more than I was ever with girls. I loved to kick a football around and I belonged to the hockey team when I was in school. But I was still a girl, though. I just loved sports, that's all. I used to love sports. I liked to win. I went out to win. If I didn't win, I wasn't annoyed about it. I just felt the next time I will, that's all."

Case Six. (This is the only mother who does not fit the form of bisexuality being delineated: She reports no tomboyishness or transsexual tendencies in herself around puberty. Nonetheless, as the quote below reveals, she is a woman who must—and can—dominate men and

"wear the pants.") "I am much more domineering than my husband. Through the years he has let me take over everything. It's easier to him to let me do it. Like in disciplining—I was always the one. I have a habit of making the decisions. I tend to say, 'I' instead of 'we'. I pay the bills. I've been the stronger one in the family, wearing the pants. . . . When I hear my son playing with his sister and the way she treats him, I sometimes see myself, unfortunately. She bosses him around. I tell her he's not your slave. She's imitating me in my voice with my husband."

Case Seven. "I had my period of being a tomboy. I played softball real good. My brothers and my father were all on minor league teams. I always was very good at baseball. I came in second at racing, in racing in the city parks, all the city parks. . . ."

Case Eight. "I don't wear pants around the house. I wear a dress, almost every day. I rarely have on pants. I wear a dress all the time. [But] before I was married, and after I was married, I wore them. They just got so they don't fit me any more. I was real smart, top in my class, you know. Nobody ever whipped me in grades. I guess this was my calling, and I never allowed them to whip me." [This woman was a very small, slight child and would not have dared to be competitive in sports.]

Case Nine. "I was a tomboy. I loved sports. I was a great sportsman in school. I used to run the races. I tried, in fact, I even won a little medal one time for being—running. I loved baseball and most of the friends I met in school were mainly sportsmen rather than very smart people. I used to play baseball with boys all the time. I used to like that particular game better because it was more of a challenge. I did very well. I used to love baseball. They always wanted me on their team. I was always very good in sports. Football, I didn't play. Basketball, I did.

"I feel as far as liking sports and being somewhat a tomboy, I always was like that. I don't remember ever wanting to primp up and be very feminine as a youngster."

Mother's Closeness to her Son

Case One. "When he was an infant, if he was restless or had the hiccups, I'd roll up my pajama top, roll down his diapers and lay him on my abdomen. It always quieted him.

"This morning I was in the bathroom undressed. He came in while I was facing backward and didn't know he was there and slapped me on the fanny and said with a laugh, 'What a lovely butt.' I laughed and told him how cute he was."

(Only a couple of evaluation hours were taped on this patient. So the following are not direct quotes from the patient but rather quotes of my notes dictated after an analytic hour:)

She then went on to talk about how close to each other they have always been. When he was an infant, she felt literally as if he could

absorb things through his skin. She said that he had a very fine, white skin and huge black eyes that he would just keep fixed on her all the time. She was with him practically continuously day and night throughout his infancy and small childhood. During the night he never slept more than an hour and a half in the first year and he would wake up screaming. She says that she has never been able to stand to hear a baby cry. So she was exhausted every night because she would sleep maybe an hour or an hour and a half and then she'd have to get up and be patting him or feeding him or singing to him or cooing to him so that all night long he and she were together whether he was awake or asleep. In the daytime it was the same. If she put him into his bed either to play by himself in the room or in the bed for a nap, he would very shortly be screaming. So she gave up trying to do this and instead would just keep him in the same room that she was in if she were working or cooking or whatever. As long as she was there, he was completely happy. This means that he felt her presence twenty-four hours a day. She never went away—as a matter of fact this coming week-end will be the first time that she has ever left him (he was over six when this was dictated). Because of this closeness, she had the feeling that as an infant he always knew exactly what was going on in her. He would keep his big black eyes focused on her and seemed to be just soaking her into himself. I asked her how come she never let him cry to see if he would get over it, and she said it was because she just couldn't stand the crying. The pediatrician had told her that she should let him cry and he would then be able to get through the night, but she was incapable of doing this.

Case Two. "If he is in the house, he is always on me. If I am sitting down, I've had it. . . .

"I'm not very modest in front of the kids. I don't know whether this is good or not but I don't cover up when they come in, and so this has been part of his life. He has always been wandering in and out when I am taking a shower or getting dressed or something. So this has been since . . . whenever he first noticed it, whatever age that would be."

Case Three. "He is very concerned that I am not going to be there all the time and even at home where I am involved and, a good deal of the time, he is happily playing; he will check several times in the course sometimes of an hour, call my name to make certain I haven't gone, which is quite unusual because I never go anywhere without telling either of the children. Even if I am going up front to the mail box I will say, 'I am going to the mail box now,' because the few times I forgot to say it there has been a small panic session. He usually likes to hold my hand when we walk or if not my hand, another part of me because he likes to be with me.

"Physical contact is quite important. The first year and a half of his young life he had to be in the same room with me, even the john—

which we finally broke from but it took a very long time . . . it seems to be something I have been doing. I do spend more time with the children than most mothers do, I will admit.

"He seems to agree verbally but he quickly reaches for the hands and if I say my hands are busy—in fact I just adopted a shoulder strap handbag because I find that I do smoke and if I carry a handbag in one hand and a cigarette in the other, I am running out of hands. So now I carry a shoulder strap bag so that at least there is one hand available when the need arises."

Case Four. "I don't think I was overly affectionate; I wasn't overbearing. I guess I was affectionate. We did everything together [in child four's first few years of life]. I had to take [her[4]] everywhere I went.

"I can't remember anything except [her] wetting the bed until [she] was eight years old. . . . [She] slept with me for about three years (sic). [She] slept in [her] own bed till [she] was two—then with me till [she] was eight.

"[She] was the most precious thing I had had, even if [she] was my fourth child. There was something very close between us."

From infancy on, nudity between child four and mother was all right. Mother never locked him out of the bathroom.

The patient says, "I remember—she would be the mother hen and I would be baby chick, and she would lay on her side like this [making a circle of her arms, trunk and thighs] and I would lay up next to her and then she would put her arm over me and that's the position we always went to sleep. Anyone who would wet all over anyone every night of the week, they would have to be doing it for pretty good reason. She would get so mad [but never stopped it]." The sleeping arrangements were that child four and mother slept in one bed, the father and brother slept in another bed, and the two sisters slept in a third bed.

Case Five. "I was delighted because it was a little boy. I would sit him on my knee before he could really sit up and brace him on my knee and practice the piano. . . . We were very close."

This mother specifically denies any further evidence of closeness other than the normal amount of handling for our society.

Case Six. "He has complete freedom with my body although when I get dressed I am now [her son is age six] closing the door."

Careful questioning of this mother by me during the evaluation and subsequently by her therapist during treatment has not revealed the intense mother-son symbiosis found in most of the other cases. However, a very special relationship exists between the boy and his sister; this will be discussed later.

Case Seven. "He would wake up crying at night. He stayed in bed with me. It was half and half: My being so sleepy that I could not get

[4] At the time of this interview, the patient had undergone sex-reassignment surgery and had been living as a woman for several years.

up and his being cold and I wanted him to get warm. I would just put him in bed right with me and keep the covers on. He would go right back to sleep as long as he was in the bed with me. That's why I got concerned a little later. I mean, this was getting out of hand—his waking up every night. He was getting to the point where I thought it was a habit more than any trouble. He wanted to be with me." (This took place every night between age ten and sixteen months.)

"I would just pull him under the covers and he would snuggle up and go to sleep. And that made me feel good too because I was pretty lonely." (Her husband was away in the Service at the time.)

Case Eight. For the first five years of this child's life he was ill, the family now knowing that he was suffering from a severe kidney disease, which began at age six months.

"He was screaming in bed with the backache and I didn't [couldn't] do anything about that. Then constant overprotection: didn't get cold, didn't get wet, after swimming lessons got body good and dry . . . I just couldn't stand him to get sick again. [To comfort him] I gave him a bottle because his fever was so high—105. It scared me. I would fix up juice and water; he would drink eight ounces down like that, you know, and then he would cool down. I gave him this over and over and over and over. It was the easiest way for me at the time to get some fluids down. I would give him that, give him aspirin or juices or anything to cool him down, dress him coolly, bathe him, hold him if he wanted me to hold him—lots of times he wants me to hold him. It hurts him and he will want him [sic] to hold him; he's frightened. He has bad dreams. [I held him] on my lap as long as he wished."

This boy is the only transsexual older than his siblings and without his mother having had many years of uninterrupted preoccupation with him. But, as one can see, because of his continuing severe kidney disease, he was given far more care, overprotection, and body contact with his mother than would have otherwise been the case; his younger brother was not given the same amount of attention.

Case Nine. The mother specifically denies special closeness between mother and son.

Birth Order

If the excessive mother-infant closeness is pathogenic, one must look at it not only qualitatively but also quantitatively: How many hours a day and how many months did it last? That mothers and infants are extremely close physically in the first months of life is not only normal but probably essential; however, when this same interaction continues for years, then it is out of phase. One might therefore surmise that the process would be abetted if the son were either the youngest child or that at least he was the youngest for years, so that his mother could spend all this time and focus all this attention upon him. This was so in

eight out of the nine cases: in six out of these nine cases, the transsexual-to-be was the youngest child; in the seventh, he was the youngest for six years; in an eighth, he was the youngest for eight years; in the ninth he was the oldest of two children but was so desperately physically sick that his mother spent far more time with him than would have normally been the case.

Father's Absence

Case One. There are no taped interviews wherein the mother is recorded talking of this. However, my notes of her analysis are filled with her descriptions of how her husband left in the morning before the children were up and usually was not home in the evening till they were in bed. Some evenings he was away entirely on business; when home he closed himself into a room where he did paper work. On weekends, he was isolated from his family so that he could enjoy his hobby.

Case Two. "My husband didn't like it [cross-dressing] at all even the first few times. He didn't *do* anything about it. He would blame me for it.

"Because of his drinking, he was getting home like 7, 8, 9 o'clock and it just progressively got later, to a point where he was going right from work to a bar and drinking until most of the time when the bar would close and then, last year—I would say the last year and a half of his drinking—he was very rarely home. He was out . . . and of course this was when my little one was fairly small, and I don't think he even knew he had a father because he never saw him, maybe on Sundays, but my husband was getting home 2, 3, 4, 5, sometimes even 7:30 a.m. and he would shower and leave for work and this was an every night thing. If I had any sense at all I would have thought that he was not going to be home for dinner—'I won't fix dinner for him'—and go ahead and eat, but I always waited. Every night we would wait and wait and wait until 7, 7:30 and we would be eating so late. So . . . because he never came home for dinner. Some night he might get home at 8:30; I don't know why, I guess he must have fallen out of the bar by mistake, but he sometimes would get home at maybe 8:30 or 9, but this was very rare; most of the time it was 2 or 2:30. And he would usually stay home on Sunday, but of course he would drink all day. Now he has given up drinking and has taken up his hobby, and we have no companionship. I mean—there is no companionship at all. He comes home and he eats and he goes out to the garage. He has the garage all built [for his hobby]; he has cabinets built out there and the whole bit. So almost every night he is out there, and on Sunday."

Case Three. ". . . and my husband isn't home an awful lot. He isn't home for dinner, for instance, most evenings and on Sundays. He is home very late on Saturdays. Saturdays his office theoretically closes at 1:00, but he very seldom gets home until 3:30 or 4, and at that point

he doesn't play with the children because he has had a long, tiring day. And he has a hobby. So he usually works at it on Saturday when he gets home. Sunday he spends—well, last year he spent most of it at his hobby, which meant he would leave the house 9:00 Sunday morning, come home for dinner sometimes. So my son didn't have much of a male influence, didn't have someone with whom he could really identify. He is very fond of Daddy but if he falls down and hurts himself, he will very seldom go to Daddy. I have to make a big deal about it: 'Daddy can fix it for you'."

Case Four. "The narcolepsy [of the father] was discovered when [the child] was six months old. He [father] would fall asleep over his food. He wouldn't take his pills at the proper time. He would take them so he could stay up all night and work. He worked nights [and slept all day].

"He was out of the house on the WPA during the depression. He had a machine shop and would lock the door." (This means that when he was home he would work in the machine shop as a hobby and was not with the family.)

Case Five. "Of course, when you start in the [X] business, you have to go out at night too. I had a wonderful early marriage, I thought. It was fine. But I know the baby was always handed over to me to do anything. If I said, 'I thought you ought to do more for him; I think you should put him in bed; why don't you bathe him tonight?' or something, he would say, 'Oh, you do it better than I do. I will run up the dishes.' Or, 'I will do something else,' and so then I stopped asking and I thought, 'Well, if this man isn't going to start doing anything for a little baby, then the little baby and the man are not going to be friends later on . . .'

"The child was in bed at six. So maybe his father didn't always see him before he went to bed, but he would always go in and peek at him. But he wasn't there to handle him a lot of the time."

As soon as World War II started in 1939, this father left the family, went to Canada and enlisted. His transsexual-to-be son was fourteen. The father returned after the War, six years later, and then, some years later, divorced the mother.

Case Six. Father speaking: "On my part, it was more or less a lack-adaisical type of nature, where my wife was running the whole show, more or less wearing the pants as far as the children are concerned. I'd come home and she'd tell me what had transpired, what she did and what she didn't do about it—and I took the easy way out . . . I have been lax with him both in companionship as well as jurisdiction as well as everything else. When he was born, I was working every night, not home at dinner or when the kids went to bed. We'd have breakfast together and we'd play a little bit or I'd be sleeping. So I hardly was with him. We'd have a day off during the week and I'd try to spend it with

all of us or do some other errands that had to be done which I didn't get a chance to do at other times . . .

"I was in the background . . . I worked Saturdays and Sundays with a day off during the week. When he was three or four, we started talking about a father-and-son day together. A few times we'd do it and then tapered off—and that was the end of it."

Case Seven. While this father was absent most of the early years of this boy's childhood, there is no need for direct quotes, for it does not appear that this father had a need to get away from his family. He was a career soldier, and was sent overseas for extended duty when the patient was an infant. He did not return for almost two years, and even then, the family lived at such a long distance from the base where he was stationed, that he had to leave in the morning before the little boy was awake and usually arrived home at bedtime or after. When his military assignment permitted, he seems to have been very much a part of his family.

Case Eight. This man was not physically absent. However, Dr. Richard Green, the family's therapist, describes him as "a third little boy in the family, even to the point of his wife's suggesting to him when he should go urinate." The mother schedules and cancels appointments for treatment and berates the father in front of the children.

Case Nine. "He [father] was around ninety percent of the time, but as far as playing games or doing anything on this order, he never did. He never said, 'Come on son, let's do this or let's do that.'

"After he got out of the age of babyhood—two years old—even at that point his father never found anything to do with him at all. In fact, I remember we used to have big discussions on that when he was young. I used to say, 'Why don't you go play baseball with him?' and then he rejected the fact of all the psychiatrists saying that this togetherness is so important; he felt that wasn't what really made a family.

"His pattern of behavior hasn't changed much since the boy was little. He comes home from work and he will go in the back yard and start working—mow the lawn, weed, taking care of the grass. Invariably he goes to work on something. That's his hobby. He does this until dinner. His only contact at dinner is to say, 'Why aren't you eating?' After dinner, he goes and reads the paper. I never saw him even sit down and play a game with any of his children or reading to them. Periodically, he would discuss affairs of the world but reading, playing, anything like that—it just didn't exist. He never put them to bed, but he did want a kiss good-night. Ninety percent of the time he would leave before the boy got up. On week-ends, there was very little contact. He would work outside around the house by himself. He did nothing with his son. I imagine he would talk to him. He'd work a lot of times on Saturdays. So it was actually only Sunday that he would . . . because he was trying to build up his business at this par-

ticular time when he was born. So Saturday was just another working day. So he really had maybe one day of all-day contact with him and invariably that day would center around all of us doing something together. Never did he take him and say, 'I'm going with just him and I' or 'I'm taking my son with me,' never.

"He [father] tries to be active. You know, a lot of it is awkward for him. When the babies were tiny, he could not pick one up and kiss him. The thing was, he just couldn't kiss a boy baby."

Father's Passivity and Bisexuality

We have much less material on the fathers' than on the mothers' personalities; the fathers have been unwilling to come in for evaluation and treatment. In some cases they would not come in at all; in others, they would come in one time, and then only with great reluctance and never again. However, very recently, after their families had been in treatment for a year or more, two of the fathers have begun treatment, and we shall learn more about them in the future. This very reluctance to cooperate is evidence of the quality that is to be discussed in this section. Not only are these fathers unable to take part in the family as masculine men, but their relationships with their wives are distant and sulking. They are unwilling to take responsibility for the function of the household but uncomplainingly persist in a loveless and almost sexless marriage.

We have some evidence of effeminacy or inadequacy in some: one is reported to have been dressed as a girl on a number of occasions by his mother, who even now disparagingly refers to his deficiencies as a man. The wife of another says, "His mother had three sons—and he wore the ribbons." A third man wets his pants up to the present or has to rush to the bathroom in many social situations; in addition, he suffers from premature ejaculations with his older wife, who is also responsible for making all the decisions in the household. A fourth one says, "I always used to kid to her [wife] and everybody that when I get reincarnated, I'm going to come back as a Jewish housewife."

Divorce

The divorce rate in this series is to all intents and purposes zero.[5] Yet these are unhappy marriages, with bouts of explosive rage, marked sexual dissatisfactions, scorn, and extended silences; powerful, angry women who cannot relinquish their passive husbands; and silent husbands who say things are all right and will not hear the despair beneath

[5] In Case Five, there was no intent to divorce, despite an empty marriage. However, this father went into the Service and stayed for years. Only then, and still only several years after he was discharged and failed to come home, did his wife divorce him. By this time, his son was living as a woman. I have listed this case in the figure as "No divorce" though this is not literally true because this mother would not divorce her husband until after she had lived abandoned for a decade.

their wives' hostility. Both have decided that this marriage is essential and divorce would be a disastrous abandonment of safety.

Sisters' Influence

Five of the nine boys have sisters, all older. In two of the five, the sisters seem not to have shaped the feminine behavior but rather to have simply gone along with it, for example, by being willing to play girls' games when the boy suggested it. In three cases, however, the sisters are very bossy and clearly lead the boys around. In two of these five families the most aggressive-appearing mothers were found, and all observers were struck by how the girls were little versions of their mothers' officiousness.

In only one mother did we not find competitive, ultra-tomboyish bisexuality. This was in Case Six, and it was in this family that the only unequivocal evidence of the sister originating the boy's dressing in girls' clothes and playing girls' games was found. We can speculate that what his mother did not do with this boy, his sister did. Here is an excerpt of an interview with the father of this boy:

Father: His sister was so overpowering, even in infancy, that I think he was more or less left by the wayside, so to speak, in the early infancy stages. She was the whole show. People would come over and "oh" and "ah" over her.

Dr. S: How much involved was she in actually being with him and taking care of him?

Father: Quite a bit; she would always have to be around when he was being changed or bathed if she was home. She was like a little mother to him when he was an infant, and as he started walking and getting a little older she would be dressing him in her clothes and playing house and what have you—him not knowing what was going on but she dressing him in her clothes.

Dr. S: Do you recall how early that was?

Father: When he started walking. She was dressing him before he could walk. She would change his diapers or things like that. She would be there with my wife helping. When we brought him—her—home from the hospital, we also tried to show no favoritism or jealousy or trying to avoid jealousy. We bought her a little baby crib and everything and the whole bit so that it would be like her baby; while my wife was changing him or taking care of him as an infant, she would have her baby to play with or make the same basic antics.

Dr. S: When did his sister then begin actually taking over?

Father: When he was about I would say between two and three—someplace around there.

Dr. S: You just said before that it started when he was just starting to walk.

Father: He walked late.

Dr. S: He was two years old before he walked?

Father: Two years, a little bit later. In the morning when they would get up, they would play together, and that is when it all started; she would start dressing him in her things. Then as he walked more and began to talk more there was more of it with he and her. He would be female

and going along with it. And she is a very domineering individual, she is, and very forceful and a strong personality—still is for that matter, and I think he sees basically a female world.

How much this daughter is like her mother is illustrated by what this mother did as a girl to *her* brother:

Mother: My youngest brother had blonde curls, and so we used to take a delight—my friends and I—in putting little girls' dresses on him. People would say, "Whose little sister is that?" He was gorgeous.

Discussion

The similarities of the findings are probably beyond coincidence; it appears, as has been noted often before in other males with strong feminine identifications, that the femininity of these males is the result of too much mother and too little father. These data do not point to a genetic, hormonal, or other physiological element significantly contributing to the boy's gender identity.

The main question, however, is whether these parental influences are different from those found in effeminate homosexuals or even in people without obvious gender problems. It is no news that domineering, overprotective mothers and weak, passive, distant fathers are often the parents of effeminate men.

My thesis, to be better tested in the future, is that the degree of femininity that develops in a boy and the forms it takes will vary according to *exactly* (not approximately) what is done to him in earliest childhood.[6]

I believe the issue can be decided by our searching for detailed descriptions of the mother-infant, the father-infant, and other intrafamily relationships. For instance, within the generalization "domineering, overprotective mothers and weak, passive, distant fathers" are many variations. What I have attempted is to show a particular type of "domineering, overprotective mother." To me, the women I have seen who are mothers of these very feminine boys, while similar in some ways, are also different from most of the mothers of other feminine and effeminate men. Especially striking has been the competitiveness as an equal with boys and the amount of dressing in boys' clothes (which I have not reported in this paper) which was the natural condition of these women in latency and early adolescence. Also, the overprotectiveness that is often reported in homosexual men's mothers is given with more

[6] This is not to imply that, in regard to gender identity, the child is simply a piece of putty shaped only by external forces. However, I believe this to be nearly the case in the early months of transsexuals' lives, but less so with transvestites or homosexuals.

I also believe that effects of biological forces are present in everyone, but that in most people these effects are silently augmented when rearing follows the direction of the biological sex. If the direction of rearing runs counter to these biological forces, they are almost always overwhelmed.

strings attached than I find in these mothers. The latter have given their infant sons a blissful closeness in which all wishes are granted, especially, unhappily, the wish to remain a part of mother's body. Then, too, I believe that the histories of homosexuals show more frequently that the parents would separate or divorce when they could not stand each other. A very different relationship prevails in these "transsexual families," wherein the parents do everything possible to remain married and under the same roof, unable to shift the status quo although recognizing the appalling state of the marriage. I think also that mothers of transsexuals give less ambivalently to their sons as compared to the mothers of many homosexuals, of transvestites, and other effeminate men. While one can find at least a bit of ambivalence in any attitude one follows into the depths of a personality, overt and measurable ambivalence towards their sons is scarcely present in the mothers of these transsexuals during infancy. One would only wish that there would have been more, for it would then possibly have provided some of the energy necessary for the normal separation that, in heathier circumstances, is promoted by mothers and their infants.

Transsexuals are similar in some ways to other feminine men in appearance and in the influences that form their gender identity in infancy and early childhood. However, the *differences* also need to be explained and not simply brushed aside with generalizations. Therefore, I repeat, if we can collect precise observations, we can explain better these differences (and we shall not have to fall back prematurely on speculative biological explanations whenever we come upon an obstacle). Ideally (and really the only truly scientific way), one would like to observe these infants from birth on. There is no need now to elaborate on the obvious problems in such an approach, but it is worth mentioning—so that our findings be not confused with findings that are direct observations—that no one has done this and that we have available only reports made years later. I report the above data only because these mothers and fathers, without the members of these couples ever having talked to another or having read anything about this alleged etiology of transsexualism, have nonetheless repeated over and over almost the same story. What these preliminary data need are controls: similarly detailed (or preferably more detailed) observations collected from families of homosexuals, transvestites, and other feminine and effeminate men.

I would expect, for instance, that mothers can be found who are as extremely competitive as were these women, and who also preferred as girls to wear boys' clothes and yet whose sons, while feminine, do not think themselves to be females trapped in a male body, that is, are not transsexuals. It should be remembered that, in helping create a transsexual, it is not what clothes the mother has worn as a girl or how tough she was in football games at age eleven, but rather what sensa-

tions *exactly* does she, now, as a mother with this infant in her arms, deliver onto his body. In this way will she transmit her own fundamental attitudes about gender—her son's gender and her own; the findings I have described are really only *indicators* that suggest what her handling of her infant will have communicated to him, but they are obviously and decidedly not the communication itself.

In addition, if such a woman should have her masculinity softened by some feminine qualities that would draw her to a less passive and distant man, then her husband would keep down the development of his son's femininity. As these parental factors are varied in quality and quantity, so, I surmise, will be the son's femininity.

Our ways of collecting data are too crude. We really cannot tell if a given theory is right or wrong and to accept or reject a given theory is still not possible. Do we know in what way an anecdote told in an evaluative interview or even one repeatedly told in a six-year psychoanalysis is related to how the informant's mother actually handled him moment by moment when he was, say, six months old? Sometimes our hunches may come very close, but the proof still lies in watching mother and infant. And what is the relationship between the high reliability, low standard deviation responses of 10,000 respondents who answer "yes" on a questionnaire asking them if their mothers were "domineering" and what each individual of those 10,000 mothers *really* did in the sixty seconds that fill out each of the sixty minutes of each hour of mothering?

So let us speculate and let our theories be imaginative and ingenious but let us also observe and let our observations someday be precise. Let us see and hear, and when we have not done so, let us have the grace to know it.

As said earlier, it is an interplay of the factors described herein, rather than simply the presence of one or two, which helps create the transsexual male; change these factors and other types of femininity will result. If this is so, then we can speculate that, for instance, *this* effeminate homosexual had a different sort of domineering mother and weak father from *that* transsexual, and, with better observations, we may even learn why one transsexual's femininity is not exactly the same as another's.

When I first found that mothers of transsexual boys clasped their infants to them too much, I was inclined to interpret it in the light of behaviorism. However, in East Africa, the mothers carry their infants nude against their nude skins for years; feminized boys are not mentioned in the reports. Obviously, more variables have to be added to the list of stimuli needed to condition an infant boy to think of himself as a girl. But that list is too long and the amounts of the stimuli to be delivered upon the infant boy too difficult to measure. The experiment cannot be reproduced at will, but only by a mother motivated to interact

upon her infant son all day long and for years with all the complex intensity that makes up all maternal behavior . . . no simple behavioristic experiment in the laboratory can simulate the psychodynamics of life that produce a transsexual.

SUMMARY

Observations made on nine consecutive male transsexuals (children, adolescents, and adults) and their families suggest that the etiology of the extreme femininity in these patients includes a strong psychological component, perhaps to the exclusion of somatic components. The constellation of these psychological components appears specific for transsexualism and is not found in other feminized or effeminate males such as transvestites or effeminate homosexuals.

These factors are: excessive, blissful physical and emotional closeness between mother and infant, extended for years and uninterrupted by other siblings; strong transsexual tendencies in the mothers throughout their own mid-childhood, such as dressing in boys' clothes and keen competition as an equal in sports and/or intellectual matters with boys (behavior which goes underground in adolescence); passive and/or effeminate fathers who are scarcely at home, day or night, during the transsexuals' first years; and an empty, angry marriage between mother and father, without moves toward separation or divorce.

CHAPTER 9

PSYCHOSOCIAL ADJUSTMENT OF TRANSSEXUALS: AN EVALUATION AND THEORETICAL FORMULATION

Henry Guze, Ph.D.

INTRODUCTION

In the history of ideas much has been said about equality of sexes. Indeed, this question has often fostered argument about the true nature of male-female differences beyond the primary reproductive function. The various cultural and religious writings and rituals have all had something to say about sex role. It is significant scripturally that Eve was derived from Adam. Stewart (1961) points out that an early theological interpretation of the scripture was "that Adam was originally created with two faces, or two body fronts, looking opposite ways, and that in due course, Eve was formed from him simply by a process of fission." Both the Midrash and Talmud imply that Adam and Eve were like Siamese twins joined back to back. Of course, the more familiar version of the creation of Eve is that she was fashioned from Adam's rib while he slept. (Stewart says that prevailing rabbinical opinion seems to be that the creation of Eve was a sad mistake on the Maker's part.)

It is admitted, according to Stewart, that the female mind is quicker and more perceptive than the male's, but women possess also unpleasant qualities. Purportedly they require perfume because they were created from a putrefying bone. Man, on the other hand, was formed from pure and wholesome earth.

Whatever the attitude toward the mythology of creation, it is provocative to think of the "surgical" splitting of man to form woman in order to be less lonely.

Anthropologically, a variety of ceremonies is performed that includes surgical incision of genitals before a person can become a full member of his given society. Explanations of some of the modes of mutilation have fallen short of adequacy, because they include the conceptual

structuring of Western mentality. Thus the position of Bettelheim (1954) follows with reference to subincision: "When men, by subincision, make themselves resemble women, the obvious interpretation of this behavior is that they are trying to be women." This is a position open to considerable dispute, but superficially seems to fit the picture of "mutilation" in the transsexual patient. Is he truly an envious male? While this seems to be a parsimonious interpretation, it may miss the reality of the patient seeking sex change. Singer and Desole (1967), in reexamining the data pertinent to subincision, take issue with Bettelheim's theory that subincision relates to an envy of the female sexual organs by the male. They quote the theory, derived from aborigines themselves (Cawte, Diagamara, and Barrett, 1966) that the surgery is performed to imitate the bifid penis of the kangaroo. I would dispute the emphasis on envy as the significant factor in a mutilation operation.

Eliade (1965) maintains that ritual transformations of novices into women—whether by assuming women's dress or by subincision—relate to a desire to recover a primordial situation of totality and perfection, a condition assumed to be applicable to the androgyne. The various theories all seem to fall short of adequate explanation of the phenomena, because there seems to be a multiple causality. The etiology of voluntarily sought surgical change of the body, whether ritualistic or individualistic, must involve profound problems of self-perception (Guze, 1967).

Since my first attempt to formulate this hypothesis, I have further developed its meaning from extensive case studies of pre- and postsurgical transsexuals and transvestites. It appears that, particularly in the transsexual patient, the penis becomes reified and is assumed to be almost a separate entity affecting the experience of the person. The effect is obtained by a magical, but also real, relationship to the total body. This splitting of the person from parts of his body or constriction of the whole being has led me to conclude that a depersonalization process was in action, *regardless of its etiology*. Among the patients in this sample—some fifty-one in all—there certainly is present a variety of other characteristics indicative of an underlying confusion, channeled into the problem of separating the "true" self from that which is superimposed by fate. It is as if an incorporated spirit were trying to break out of incarceration.

Self-imposed ritualistic castration is not a new development in our culture. Remondino (1900) describes cases of religious mania involving self-mutilation. It is noteworthy that Origen[1] and his monks carried into effect self-castration and that the Skoptsy—a Russian religious sect—indulged in similar behavior. The various culturally

[1] Origen (Origenes Adamantius) was reproached by the Church and as a eunuch was excluded from its presbytery on the ground that he lacked the necessary qualification, according to canon law, namely, of not being deformed or mutilated in any manner.

imposed operations for and purposes of eunuchism are too numerous to discuss in this paper. One must draw a careful distinction between eunuchism forced on a person and the self-imposed state. However, it seems that the culture plays some role in the latter condition also.

Theoretic Formulation

There is a curious note one may add, and that is that the transsexual patient in some ways seems to put masculinity on a pedestal and responds as if he were truly unworthy of that role. Since he feels he does not fit the cultural concept of the male, a concept he fears but loves and admires, he must be a female. The homosexual step is denied. The patients present a variety of problems that involve denial.

The biology of denial is, it seems to this writer, basic to an understanding of the transsexual syndrome. The problem of self-perception in this disorder has been described elsewhere (Guze, 1967). I should like to postulate a mechanism of gender orientation related to the level of brain functioning. Thus in the presence of certain aspects of damage to the nervous system, there may be a disturbance in integration expressed in a kind of anosognosia, that is, a failure to recognize impairment (English and English, 1958). It is hypothesized that development of the masculine role requires greater differentiation, both morphologically and behaviorally, than development of the feminine role. As is well known, "The physiological mechanisms for feminine sexual behavior are found in all males and those for masculine behavior exist in all females" (Beach, 1948). Under appropriate stimulation, males may assume the female role and vice versa. Some investigators assume that the "feminine stance" in a male is a function of predisposition in gender orientation (Diamond, 1965). This point of view coincides with that of other researchers, but is contrary to that of Hampson and Hampson (1961).

It seems that the data on which this study is based point to some disturbance in neuropsychological integrity as a cause for denial of the assigned gender role. Evidence has been presented by Weinstein and Kahn (1955) that sexual attitudes and expressions were altered in patients with specific types of brain damage. The patients I have examined seem unable to accept their apparent body-image and, frequently, behave as if they were two persons: one presenting with a request for surgery and the other to be released or revealed. The request is for the castration of the applicant. It is pertinent that the disturbance ranges from a willingness to live as a dual person to the drastic demand for surgery. Benjamin (1966) has described these persons most adequately in terms of his sex orientation scale. The transvestite may vary from the one who behaves as if he were a male and a female who live together to the one who purportedly just enjoys dressing as a fetishistic expression. It is clinically impressive that transvestites are very concerned

with their appearance as women and in many cases may masturbate as they see themselves in a mirror.

Personality Traits

Prior to surgery, the transsexual presents a number of personality traits which place him in a severe dilemma. To begin with, he feels different from other males and purportedly more like a female. One must be very cautious in accepting such statement at face value. In many of the patients I have observed, the idea of feeling like a woman, or like a man in the case of female transsexuals, is difficult to verify by comparison with persons of normal gender orientation. To say that a man feels like a female is at best a simile. The effort to behave like a woman is frequently marked by ineptitude and overcompensation. The repeated statement one hears is: "I'm different. I don't belong, therefore I'll change my sex so you can accept me." There's an expression of profound loneliness and perhaps desire for an approval which is not forthcoming. In this sense, the patient responds with an aggressive demand to be changed. Is he thereby creating a woman he can accept or is he showing that he is not a threat and thus avoiding violence? The interviews with the transsexual male reveal an abhorrence of any type of aggression in his early life. He might say: "I'm really a woman—don't hurt me. I'll do what you want." The converse of this for women who seek to change to the masculine role is more marked aggressiveness and perhaps the ideation: "I'm really a man—don't give me special protection. I'll do what I want."

In either case, the patient insists that God cheated him, and there's a tremendous undercurrent of resentment toward the Deity and authority. In scaling the patient's behavior, one finds an intense spitefulness in almost all of the persons studied, both men and women.

Perhaps of most importance is the self-concept or body image before surgery. The nature of body image depends upon the adequate functioning of the nervous system. It seems that the person's sexuality determines many of his interpersonal perceptions and is in turn determined by them. The self-image or the awareness of the body is a function of its separation from the outside world. Schilder (1935) has suggested in a psychoanalytic presentation that recognition of one's own body developmentally involves secondary narcissism. Thus the person turns from the object world toward self-affection. The transsexual patient seems to be unable to accept his own body-image and invest affect in himself. His is a conflicting experience: The outer world expects him to be a man, but he feels unable to fulfil that expectation and concludes that he must be a physically malformed woman. The psychologically crippled male can escape into the rationalization of the malformed woman by denying the male. Likewise the female transsexual can deny her femaleness by claiming to be a crippled male. But why all this maneuvering? The answer lies in the fact that the transsexual has behaved like two

persons. His anatomical masculine self has created a female subject that he can respond to—an Eve, so to speak. While the transvestite responds freely, masturbating as he observes his female counterpart in the mirror, the transsexual cannot do this. Why? There are several clinical hypotheses: (1) He has never reached an adequate stage of masculine development and thus he perceives his fantasy as himself. (2) He is extremely puritanical and refuses to be aroused by his image. Consequently, he must destroy himself so that his image may survive. He refuses to accept the duality, because he cannot perceive it. Rather, the transsexual perceives himself as a woman imprisoned in the male body which he experiences, or vice versa. It is noteworthy that I have seen a number of male transvestites who relinquished cross-dressing when they became involved with transsexuals. The meaning of this phenomenon is not at all clear, but there is an implication of the mirror-image being fulfilled in some way. The identification of the Eonist with the person of the opposite sex has many etiological components. Flugel (1950) refers to an interesting psychoanalytical suggestion made by Fenichel in 1929, that is, (1) an unconscious refusal to accept the lack of a penis in women; the transvestite male attributes masculine powers to his female, and (2) an unconscious identification of the self with the penis-possessing woman. This position seems to be a simplification, albeit a significant one, of a much more complex situation. Anatole France (referred to by Flugel) predicted that at some time, in a more tolerant world than his, the degree of sex distinctiveness in dress would correspond more to the degree of heterosexual or homosexual differentiation of the wearer.

Because of the variety of social factors which could be involved in certain aspects of cross-dressing, such as in couvade or in deceiving the evil demons, the compulsive eonist must finally be examined in terms of his inner feelings. These inner feelings are even more dramatic in the case of the transsexual.

It must be remembered that the transsexual candidates come to us for psychological evaluation, most often after considerable hormonal therapy (estrogens). The effect is not as clear as one would expect. I have often wondered what the effect would be of androgens. Would the males thus treated show a reduced drive for sex change or would there be an intensification of the drive? Surely one cannot postulate a clear hormonal effect on the men and women seeking surgical intervention. The mechanisms of emotional response are very complex, as pointed out by Pribram (1967). The latter sees amount of arousal as dependent upon a change in the uncertainty (and thus the information) of the nervous system. Pribram has emphasized the central control of peripheral input.

I should like to propose a homeostatic theory of gender orientation. Such position would posit a need for "balance" between the inner aspects of masculinity or femininity and the nature of the outer stimuli.

Thus the female organism, in order to function, appropriately must be submitted to such input that it will respond in a feminine manner. This, of course, is much influenced by the culture and the immediate surroundings. Studies of animal behavior have demonstrated that the stimulus constellation may affect the behavior of the animal. Thus Berg (1944) finds that in the male dog elevation of the leg during micturition is a secondary sex characteristic that depends upon testicular androgens. This response is usually fully individuated by the fifth month after birth. Under fear-producing stimuli, however, dogs of this age will still revert to the female urinary position. The situation one is faced with is a problem of appropriate input at the critical periods. It is not at all clear what makes an appropriate environment for the elicitation of normal sexual development.

Among the patients whom I have seen, the males often given the clinical impression of animals who have been defeated in a physical encounter. Despite their frequent success in various areas of their endeavor, they seem to be ready for flight. The persons who seek sex-change operations may be classified as follows: (1) Males who might or might not appear effeminate and females who, as far as our very small sample indicates, do not appear masculine in general structure and size. (2) Persons who have shown response to the opposite gender role from childhood, as indicated by data relating to effeminacy in prepubertal boys (Green and Money, 1960, 1961).[2] (3) Persons who show problems of self-identification and psychotic reactions. (4) Persons with latent or expressed homosexuality.

Prior to surgery, the transsexual patient is frequently suicidal and may engage in self-mutilation. There is a fetishistic response to the feminine by the male candidate and vice versa. The transsexual candidates are usually highly intelligent, very verbal, and given to much fantasy, their speech is filled with resentful comments about medicine and law, and in spite of their docility, they take considerable risks.

Before proceeding to a discussion of the postsurgical situation it is important to take note of Stoller's (1967a) suggestion that the younger transsexual boys have had excessive contact with the mother's body over a long period of time—while a father was absent and did not interrupt the process of feminization. Stoller considers that the boys who yield to this overpowering maternal experience may also have a biological predisposition to femininity.

Postoperative Status

My role in the Harry Benjamin Foundation Research Project has been to carry out four to six depth interviews with the patients pre-

[2] Currently, this writer and some of his colleagues are treating such childhood cases. Also see Chapter 2 by Green.

surgically, and the same number postsurgically. In the event of severe emotional distress, I have also seen the patients in my capacity as a clinician. In some cases (four transsexuals and three transvestites) I have carried on continuous psychotherapy with the patients. I have also made an effort to observe both the transvestites and transsexuals on social occasions, as I believe that there is a specific anthropology of the people who cross-dress and those who change sex. Their social strivings and interpersonal relationships are significant if one tries to understand better their condition.

For some of our patients, the postsurgical period is marked by a reduction of the panic reaction. In a communication received from one who had just been operated upon, the letter began with a reference to this person's presurgical phobia of butterflies which she seemed to understand postsurgically. The butterfly was herself that had long been a pupa. It is, however, not clear what the patient's real feelings are. There is an effort to overlook the severity of the surgery, which is taken with remarkable "masculine" courage. The plastic repair is rationalized as being good, but not with total lack of criticism. An immediate problem facing the novice female is the sudden awareness of a body image that still does not match the inner fantasy or the outer models for comparison. There is placidity, as well as concern about appearance. This varies considerably with the person's preoperative body type and facial features.

The feeling of belonging is difficult to assess clinically. The patients who seek sex-change are deeply concerned with problems of identification. The transsexual patient has a conflict between his self-image and his experience of his body form (Guze, 1967). Because of this dichotomous situation, the patient belongs to one group morphologically, and to another group psychologically. Perhaps this is the essence of all problems of uncertainty about one's place in the social situation. If the individual has the appearance of a lion, but the functional capacity of a mouse, there is likely to be conflict between the social demands placed on him and his ability to meet those demands, as illustrated by the cowardly lion in *The Wizard of Oz.*

It is assumed that surgical "correction" of the confused patient should rectify his situation, so that his drive orientation and his anatomy are not in dire conflict. There are many interesting reactions in the postsurgical state of our patients. While a frequent response is elation at being closer to one's imaged self, there are noteworthy exceptions. A question which has frequently entered my thinking has related to the specific effect of the surgery itself: Could another type of surgery act as a placebo and bring about sufficient change in the patient's behavior to reduce the presurgical conflicts?

There are several serious problems inherent in the surgical treatment. It appears that, in spite of the surgery, three patients in our sample re-

tained phantom images of their previous anatomy. There is every reason to assume the existence of phantom responses after a castration operation in about the same proportion that they might appear after limb amputations. (See Chapters 6 by Money and Primrose and 7 by Money and Brennan.)

While almost all patients claim to be delighted about the change postsurgically, both subtle and gross expressions of psychological disorder have been observed in some nine patients. The subtle manifestations are dreams of death, and inexplicable phobias (three patients sleep with the lights on at all times). In all cases there is continuing concern about their physical appearance, frequently beyond the immediate realistic problems. Two patients have had dreams of being their previous masculine selves, even responsive sexually to women. Thus there has appeared a so-called lesbian conflict. This casts further light on some of the possible psychodynamics, where the castrated male patient suddenly finds that he can respond to women. A few of the cases I have examined (three) have shown extensive guilt about the families they left, and their previous lives.

A gross problem in two cases has been a severe reaction of remorse. After a period of psychotherapy these patients have come to feel both angry and hopeless because they were no longer able to return to their previous masculine state. Both pre- and postsurgically an imminent danger is deep depression. The person in some cases shows clear-cut evidence of depressive response after the surgery. I have been much concerned with the excessive spitefulness and vindictiveness of all of the patients examined. There is an extreme emphasis on propriety and morals, yet at the same time, phantasies of prostitution and debasement are expressed.

Postsurgically, the majority of patients behave more calmly. They are generally faced with problems of adjustment that involve posture, movement, vocation, and relationships. There is also the problem of guilt and resentment. There is surely still evidence that the patients need the assistance of good psychotherapy. There may be feelings of loneliness and of being peripheral. An aspect of much concern to the novice female is the development of a sexual life. In a number of our cases this was much hampered by the inadequacy of the artificial vagina. It is provocative that many transsexuals speak of their vagina in a reified way —almost as if it were a separate object.

Conclusions

In evaluating interview and psychotherapy data, I have made an effort to arrive at qualitative descriptive data rather than simple statistical statements. This was necessary because of the small size of our sample and the need for devising a pattern to be followed in examining the patients in our research. While, historically, psychotherapy has been ineffective, as indicated by Benjamin (1966), it seems that the approaches

were too limited and parochial, mostly psychoanalytic. Whether or not surgery is performed, both pre- and postoperative psychotherapy seems necessary, particularly in select cases. As pointed out by Green (1967), physician's attitudes must be geared to the reality of this syndrome. While the full understanding is far from available, it is imperative that the situation be openly and extensively investigated. Although some cases may not need surgery, in others it acts as a life-saving force for whatever reasons. The approach of openness and understanding will foster new avenues of research and interdisciplinary cooperation. The older literature shows clearly the unfortunate experience of the obvious transsexual, mistreated, misunderstood, and driven to suicide, as was reported by Rosanoff (1938). The latter formulated a genetic theory of chaotic sexuality and argued that these traits were intractable for the most part. In a paper written some three decades ago, Rosanoff (1935) suggested that genetic factors for psychosexual makeup must be to some extent independent from those for physical makeup. He arrived at six possible male and nine possible female psychosexual patterns. On the basis of mating of representatives of each pattern, he calculated fifty-four theoretically possible psychosexual types of offspring. Whether or not he had a basis for research, the area is open for testable theoretical formulations. Perhaps several good hypotheses may be derived side by side and overlap.

From the data gathered, I have formulated a hypothesis of experience deprivation during critical periods. Thus masculine development requires appropriate exposure in the critical periods, at whatever age they may occur. The lack of such experience leads to the incorporation of a feminine image. The evidence seems to indicate an early leaning toward the female pattern, biologically, unless a male model is developed. Thus a boy child is superficially more like a girl child or a woman until he reaches pubescence. There are indeed variations in this pattern and the extent of its persistence. Some boys do not mature early, and their undermaturity may result in elicitation of social behavior which relegates them into a feminine role.

Such behavior is historically and culturally well known. Lucretius (Latham, 1967) refers to a man being pierced by the shafts of Venus, "whether they are launched by a lad with womanish limbs, or a woman radiating love from her whole body." Davenport (1965) reports that, among the people of a Southwest Pacific society, homosexual behavior involving older men and boys from seven to about eleven years of age is completely acceptable. In this cultural milieu, homosexual behavior is part of the total pattern. Apparently, it may happen to any boy. There is no evidence that such a boy will develop into a man with gender problems.

I should like to hypothesize that during the periods when a boy child is least developed in the masculine direction, he needs both contact and identification with a male in a manner that is not exploitative. The

girl child can also be forced into psychological distortion by inadequate identification with a female, and lack of opportunity to express feminine behavior. Why the female escapes, if she does, the severe gender problems that occur in the male, is not totally clear. There seem to be a number of reasons why, in our culture, the girl child has earlier opportunities to identify with the female than the boy child with the male.

In the final analysis, while transsexual males seem to have homosexual tendencies presurgically, they are not confronted merely with this problem. To reiterate, the difficulty seems to be a perceptual one, manifest in role reversal. Churchill (1967) speaks of transvestitic impersonations as either wholly satirical or wholly sentimental. He adds that "most other" homosexuals consider the highly effeminate male an abomination and are highly intolerant of him. Although homosexuality and cross-dressing are related, they appear to be independent traits. As suggested by Stoller (1967 b), gender connotes "psychological aspects of thinking and behavior related to masculinity and femininity; gender is social." Stoller speaks of cases where sexual distinction is unclear at birth. These infants are brought up in a so-called hermaphroditic gender. Perhaps indeed there is a whole array of genders: male, female, male-like female, female-like male, hermaphroditic male, hermaphroditic female, bisexual male, bisexual female, etc.

This listing is reminiscent of Rosanoff's genetic schema referred to previously. The important conclusion seems to be that nervous system mechanisms for sexuality are inherited separately from physical aspects of gonadal organization—this opens a vast area for research such as that pursued in the book by Gorski and Whalen (1967). The relationship of brain and hormonal function is being gradually worked out by imaginative and courageous researchers. The evidence has increasingly shown an effect of the brain on the endocrine system and on cyclic behavior. Barraclough and Gorski (1961) have demonstrated the homeostatic quality of brain endocrine relations. Thus a brain, male or female, exposed to male hormone, at a critical time in its development, becomes unable to support cyclical sexual activity or female sexual behavior.

The concept of a male and female brain is not new, having been speculatively presented by Krafft-Ebing. Neurophysiological mechanisms must indeed be involved. The problem that has challenged this writer has been the obvious variety of etiological components in the elicitation of transsexual and transvestitic behavior. MacLean (1967) has been concerned with localizing areas of sexual reactivity in the squirrel monkey. It is noteworthy that a variety of different types of stimuli elicit penile reactions. Likewise the sexual response in higher mammals can be conditioned to sundry types of signals. Lilly has reported (in MacLean's paper) that a dolphin, *Tursiops truncatus*, can be easily trained to have erections to simple visual cues.

Observation of pre- and postsurgical transsexual patients indicates not only a serious problem in body image, but also, our data suggest, that this problem occurs in consequence of exposing a susceptible person to deprivation experiences at critical periods in his sexual development. The resulting gender confusion is marked by a drive to radically alter one's physical image—probably to fit with the idealized internal concept of the self. I believe that the sex-role body model is harder to attain, even under ordinary circumstances, by the male. Katcher and Levin (1955) have presented research data to point to the idea that girls learn to assign definite sex-role characteristics to their bodies earlier than boys.

The combination of biological, psychological, and cultural factors that make for the appearance of the self must carefully be investigated. The transsexual syndrome is one aspect of the total complex of body image and personality and cannot successfully be studied in total isolation. I agree with Henry Head's (1920) classical position about body image as a standard against which all body movements and postures are judged. The integration of the self into the inner and outer environment is, after all, the key problem of human personality.

SUMMARY

The theme of the bisexuality of human beings occurs historically and mythologically. The creation myth refers to the surgical separation of male from female. Male envy of the female body is one theory to explain the practice of subincision in aboriginal Australia. The transformation of men into women must involve, if voluntarily sought after, profound problems of self-perception. The splitting of the person from parts of his body or the constriction of the whole human being leads to the conclusion that a depersonalization process is in action in the transsexual.

New discoveries of brain and endocrine mechanisms in sexual differentiation may prove relevant to transsexualism. The male undergoes more complex differentiation, both morphologically and behaviorally, than the female. The transsexual patient has a sense of non-belonging. He does not perceive his own body image as that of a man and feels himself unable to deal with the expectation of masculinity. At present there seems to be neither hormonal nor psychotherapeutic means of organizing the image.

In a homeostatic theory of gender orientation, the inner aspects of masculinity and femininity need to be in balance with the nature of the outer stimuli. The stimulus constellation governs the behavior of the individual. Postsurgical reactions are variable, as is the handling of mutilation anxiety. Biological, psychological, and cultural factors must be attended to in the study of the self, with attention to critical periods and deprivation experiences.

CHAPTER 10

TRANSSEXUALISM AND SEXUALITY: SEXUAL BEHAVIOR OF PRE- AND POSTOPERATIVE MALE TRANSSEXUALS

Wardell B. Pomeroy, Ph.D.

In conjunction with ongoing research sponsored by the Harry Benjamin Foundation, information on the sexual lives of male transsexual subjects is being collected. Records of these sexual histories follow, with some modifications, the general format of histories secured at the Institute for Sex Research, where the author had previously worked for twenty years. Although both female transsexuals and male transvestites are also being interviewed, the present report is limited to the first twenty-five male transsexuals included in the current research program.

Information on the sexual life of transsexuals is needed to clarify a number of questions: Will the males who identify themselves as females develop a female type of sexual behavior? Will they be genitally oriented as the usual male or will their sexuality be more diffuse as is the case in the usual female? Will there be any cyclical quality to their sexuality? Will they tend to be more aggressive or more passive? Will their gender role confusion disrupt their sexual lives? Will their sexual object orientation be directed toward males or females? Will they be more hypersexual or hyposexual? Is there anything about their sexual lives which will aid in either diagnosis or prognosis? Will it give any clues as to underlying neuroses or psychoses? How do they perform sexually after a conversion operation? Certainly there are a dozen or more other relevant questions which properly could be asked. This chapter attempts to take a small step toward finding their answers.

The twenty-five transsexuals in our sample ranged in age from nineteen to sixty-six. Their mean age was thirty-three. Their mean educational grade was twelve, with one Ph.D., one M.D., and four others with B.A. degrees. A quarter of them failed to complete high school. Their educational background, especially those in the upper half of the sample,

means that they were capable of coping with sophisticated concepts. Most of them had read everything they could about transsexualism and transvestism and were quite prepared to discuss their backgrounds and their feelings on an intellectual basis. Only a few had gone to a therapist of any sort and routinely they reported they got no help from this source in changing their drive to secure a conversion operation.

Fifteen, or sixty percent, were Catholic, eight were Protestant, and two were Jewish. Although only five of the subjects were still active churchgoers, it is of some interest that twenty-three of the twenty-five subjects had been devoutly religious or at least were active churchgoers when they were young. Because the confusion in gender identity occurs in early childhood this early religious experience may be of considerable significance. It may be possible that a rigid religious training makes it more difficult for a young child to accept himself as a male or to accept his own sexuality. Some of them reported that homosexuality was so immoral to them that the only way they could have sex with males was to become a female. Certainly the high percentage of transsexuals who had early, intense religious exposure needs further exploration.

One of the outstanding characteristics of the transsexuals in this group was their isolation from other children when they were young. Out of twenty-three on whom we have records, twenty-one reported no, or essentially no, male companions at ages ten and eleven and eighteen reported no female companions at those ages. Nine were complete isolates from all children. Only two seemed to have the usual number of companions. At ages sixteen and seventeen about half had the usual number of male companions but fewer than a quarter of them reported having the usual number of female companions. Certainly transsexuals tend to be "loners" in childhood as well as in their adult lives. However, one must be careful in ascribing a cause-and-effect relationship between social isolation and transsexualism. It is questionable as to which, if either, may be cause and which effect. Conflict over gender-role identity certainly contributed to their avoidance of social contact with both males and females. They felt themselves to be neither fish nor fowl—they had failed at being males but still were not females, but how much their social isolation contributed to the development of their feelings of transsexualism is an unknown quantity.

In half of the cases the parents were separated by divorce or death during the subjects' childhood. This does not seem to me to be a strikingly high figure (about a third of the subjects in a random sample might be expected to come from broken homes), especially in view of the fact that the subjects reported that they got along with both parents or parent surrogates about as well as one might expect from studies of normal people. Also they reported no more than an average amount of dissension and quarreling between parents in the home. At least on a

superficial level there was no particular overidentification with the mother or with other female relatives nor is there any unusual distance between the subjects and their parents, even though they felt they had to keep their transvestism from them.

It is desirable to interview all parents and siblings of transsexuals, whenever possible. We have done this to a limited extent and have found almost universally these interviews to yield additional insights. Some workers have reported that transsexuals are notoriously poor in reporting their early childhood experiences and feelings because of their intense desire to convince the interviewer, and themselves, that they are female and always have been. In the limited number of pre- and postoperative interviews in this study, I have been impressed with their high consistency. Patients are able to repeat their sexual histories with a remarkable degree of accuracy from one time to the next. However, validity is another matter—all I can report at this time is a clinical impression that the subjects, with three exceptions, appeared to be very cooperative and their histories were internally consistent. It is my guess that the distortion in the histories of transsexuals is not as great as many workers in this field have believed.

Preadolescent sex play reported by this group was minimal. This finding again emphasizes the transsexual's social isolation and sexual restraint. About a quarter of them reported such play, whereas in a normal sample one might expect well over a half to have engaged in preadolescent sex play. More of it was with females than with males. This is of some interest because, as we shall see, as adults more are homosexual than heterosexual. Three of them had preadolescent sex play with their sisters. In two of these cases it was extensive and may have been of considerable importance in their transsexual development. The sample is very small for generalizations but the attempt to emulate their sisters and the attempt to become identified with them through sex play is striking in these two cases.

Even though these patients were relatively socially isolated, reported masturbation rates were on the low side. Only sixteen percent reported rates higher than the average of a normal sample of males in early adolescence. On the other hand, about a quarter of them reported masturbation rates of less than once a month. Many of them reported that their male genitalia were anathema to them and that masturbation reminded them of their maleness. About one in four avoided touching the genitalia in masturbation—they used bed masturbation or insertions of an object into the anus rather than manual masturbation. Fantasies were almost always of themselves as females having intercourse with a male.

Nocturnal emissions were absent in a third. and frequency was almost always very low for the remaining two-thirds of the subjects. Dream content centered around the subject as a female being entered by a male.

In some cases they reported their dreams as being devoid of overt sexual behavior; orgasm occurred merely as a result of dreams of themselves being females.

A third of the transsexuals had been married, one for as long as thirty years, and one was married twice. Premarital heterosexual intercourse was nonexistent for over forty percent of the group and was low and sporadic for all but four of the remaining. Marital intercourse rates were low, often to the vanishing point. The flight into marriage was an attempt to solve the problem of gender identity but, as with most homosexuals, it did not.

Only two had had no overt homosexual contact and, for over a half of the subjects, homosexual activity was extensive in adult life, usually with many different partners. Nearly half of the group had been exclusively homosexual throughout their adult life. In only one case was the subject more heterosexual than homosexual, if one considers his psychologic responses and fantasy. In two cases there seemed to be about an equal sexual response to females and males, and in the remaining cases homosexual response and fantasy predominated.

Nothing was observed (with one exception as noted below) that would indicate any cyclical nature to these patients' sexuality. They all would have welcomed menstruation as a further indication of their femaleness, but in only one case was there reported any monthly cycle of headaches and cramps. This person took oral contraceptive pills continuously over a period of a few months in an attempt to break this cycle, but to no avail.

Eleven of the patients have been transsexually operated, but only eight of these were interviewed after operation, with a median time lapse of two years. Thumbnail sketches of their postoperative sexual lives follow.

Case One. Age twenty-nine. Operated four months. Still some tenderness around the genitalia. No intercourse, no masturbation, no orgasm. Parents have accepted her as a female and she feels much more comfortable with herself and others. Is now not so anxious and depressed. Hopes to meet a man and marry eventually.

Case Two. Age thirty. Operated sixteen months. The operation was done poorly so the vaginal opening is too small for coitus. Is now undergoing repair surgery. Has lived in common law marriage with a man who knows of the conversion operation and is himself a transvestite. Petting to climax by masturbation and cunnilingus reported two to three times a week. Would eventually like to adopt a child.

Case Three. Age forty-five. Operated twenty months. Intercourse reported only once, with orgasm and some ejaculation. Masturbation began eight months after operation, averages about once in three weeks. Is living with her father who accepts her as a female, as do most of her relatives and friends. Broke up a long-time affair she had had prior to

the operation because the man began to lose interest in her. Is now going with a widower of fifty-seven who wants to marry her but is impotent. He does not know she was formerly a male. (Recently, the patient began going with another man who also wants to marry her and who also does not know of her operation. She thinks she will probably marry this second man eventually and has no plans of telling him that she was formerly a male.)

Case Four. Age thirty-one. Operated thirty-six months. Reports intercourse with about thirty-five males since her operation, mostly for pay. Lives in common-law marriage with a man who knows of her operation, is not in love with him, but may marry him anyway for security. Orgasm reported always if the male does not know of her conversion—never if he does know about it. Masturbation reported about twenty-five times. (In this case, there is considerable doubt that the patient has ever had orgasm since the operation. Her descriptions of her sexual sensations raise considerable doubt as to the orgasm and resolution phase following it.) There is no ejaculation as may occur sometimes following operation, dependent on hormonal status and prostatic function.

Case Five. Age twenty-nine. Operated twenty months. Reports intercourse two months after operation and, thereafter, with many different males. Orgasm reported about a third of the time and described as much more dramatic than before the conversion. Masturbated only once and had "lesbian" relations with females twice. Would like to get married and settle down to a peaceful family life but suspects she will end up marrying a wealthy man for security.

Case Six. Age twenty-nine. Operated thirty months. Reports intercourse three to four times a week, mostly for pay. About twenty percent of her paying customers know that she was formerly a male. Orgasm in coitus is rare but it does occur. Occasionally masturbates to orgasm by using a vaginal dilator. Began intercourse within four months after the operation. Before she had begun to prostitute, she had orgasm about seventy-five percent of the time, but not as strong as before the conversion, and took a bit longer to achieve.

Case Seven. Age thirty-six. Operated fifteen months. Her parents have accepted her operation and she is living at home with them. Has dated six different males since the operation, three of them knowing that she has previously been a male. Had intercourse with one of these latter males on two occasions, without orgasm. Reports no masturbation since the conversion.

Case Eight. Age fifty-two. Operated eleven years. Has lived in common-law marriage for the past nine years with one man. She has intercourse with him about once a week. He learned of her conversion about a year ago but it has made no difference in their relationship with each other. Reports three to six orgasms per intercourse. (As in Case Four, it

is doubtful from her description that the patient has ever had an orgasm since the operation.)

SUMMARY

The sexual histories of twenty-five male transsexuals who have been studied are difficult to summarize because of their considerable diversity. By and large, they appeared to be rather rigid, moralistic, isolated people with, usually, rather low rates of overt sexual behavior but a very great fantasy life which was compulsive and irreversibly transsexual. They were not fetishistic, as transvestites usually are, but received a great deal of relief when they were able to dress as females and act like females. It was not the female clothing, *per se*, which gave them this relief, but the adoption of the total female role.

Without an exception those that were operated felt better about themselves both psychologically and sexually. They were less depressed and less anxious. None of them regretted the operation. They seemed to be on the road to making a good sexual adjustment, at least a better one than they were able to make as males, and in this respect, there is every reason to believe that conversion operations were beneficial.

CHAPTER 11

PSYCHOLOGICAL TESTING OF MALE TRANSSEXUALS: A BRIEF REPORT OF RESULTS FROM THE WECHSLER ADULT INTELLIGENCE SCALE, THE THEMATIC APPERCEPTION TEST, AND THE HOUSE-TREE-PERSON TEST

Ruth Rae Doorbar, Ph.D.

This chapter describes the administration and interpretation of a selected number of the psychological tests which were given to thirty-four male transsexual patients. The tests in the entire battery are:

Wechsler Adult Intelligence Scale (WAIS)
House-Tree-Person Test (HTP)
Rorschach Test
Drawing of Self Concept
Thematic Apperception Test (TAT)
Bender Gestalt
MMPI
Strong Vocational Interest Test (Male and Female Forms)
Jenkins Test (a factor-analyzed written personality test developed at New York University)

Wechsler Adult Intelligence Scale

The distribution of overall intelligence tests scores of transsexual subjects is markedly different from the general population (Figure 1).[1]

No patient has an IQ score lower than 85, hence there are no representations for them in the first two columns. A smaller percentage than what might be expected is found in the Dull Normal Range, IQ 80–89, and a far smaller percentage than might be expected in the Average Range, IQ 90–109.

[1] All figures appear at the end of this chapter.

More than half of the patients are found in the Bright Normal Range, IQ 110–119, and there are six times as many as would be expected in the Superior Group, with IQ over 130.

These percentages refer to actual IQ scores obtained on the Wechsler Adult Intelligence Scale. It is also important to note that many of the patients give evidence of somewhat higher potential, with eight of the patients showing potentials over IQ 140.

There are at least two possible explanations for this phenomenon. First, these are, after all, people who have taken some initiative to seek out a solution to their problem and contact persons who, they hope, will help them. All of this requires a fair degree of effective intellectual capacity.

Second, the conceptualization of the sex role per se, plus the idea of the possibility of altering it, certainly require a fairly high basic intellectual capacity for abstract reasoning. These are not patients who just complain "I want to become a female," but who discuss concepts of masculinity and femininity, the social advantages and disadvantages of both sex roles, etc. It is hypothesized that this psychological problem, at least in the fairly extensive and complexly developed form in which it is seen in this study, would be quite difficult to conceptualize for a person of below average intellectual endowment.

Thematic Apperception Test

On the TAT cards, these patients are highly verbal and very productive. Most predominant, as might be expected in these cases, is emphasis on love and sex relations. Highly idealized stories of love and marriage between males and females are told, with the patient identifying with the female. There is a clearly obsessive interest in identifying the physiological sex and the actual gender roles of the figures in the TAT. Many of the figures on this test lend themselves easily to this treatment because they are in reality somewhat ambiguous in terms of sexual identification. Often the sex, described as *given*, and the gender roles, described as *chosen*, differ.

Cards frequently interpreted by other observers as depicting sisterly relationships elicit from this test group stories of love between lesbians. For some patients, the picture is even more confused, with several genetic male patients reporting that if they received a sex-change operation and could not successfully adjust as "heterosexual" females in love relations with genetic males, they might at least assume a role which is assumed by genetic females, and become lesbians.

Several patients have expressed the idea that certain aspects of masculinity which they might still carry overtly, combined with female genitals, would make them highly successful in the role of the more masculine member of a female homosexual team. It becomes apparent here that these persons desperately wish to be in roles in which they are

loved and accepted by others—sometimes despite the compromises necessary.

On cards with pictures of male figures only, a theme of homosexuality was projected frequently. It is of interest that in many of the families of these patients, other siblings remain unmarried and are described by patients as quite masculine in the case of sisters and somewhat feminine in the case of brothers. Several patients stated that they had sisters whom they knew to be lesbians, and several other patients described the open homosexual experiences of their brothers and fathers.

However, almost without exception, these patients refer to homosexuality in tones of rejection and even disgust. Sometimes this attitude seems to be based on their own previous emotionally unsatisfying experiences with members of their own sex, but in almost all instances it is colored with some moral values and perhaps religious overtones.

When describing their homosexual experiences, these patients place great emphasis on the fact that much kissing, petting, and bodily contact occurred, but that only the partner's genitals were involved. Unless the partner could ignore the patient's genitals, and thus maintain the patient's phantasy of being a female, he quickly became an unsatisfactory partner.

In general, the cards designed for females bring forth far more and far richer responses than those designed for males. Warm feelings for mother figures are contrasted with cool, absent, and sometimes quite hostile responses to father figures. These patients are quite narcissistic and they launch into self references particularly in response to cards depicting children. They tell of their own unhappy childhoods when they felt rejected by girls because they were boys, and by boys because they were sissies or in some way effeminate. This problem of having an effeminate male child in the family seems to have been easier for the mothers to accept than for the fathers. The mothers in general were mildly disapproving or accepting.

It is interesting to note that the fathers, while they had often rejected totally their effeminate sons, in several instances not only accepted them after the sons have become charming, attractive daughters but were even proud of them and affectionate to them.

In quite a number of instances patients described their mother's desire for a female child at the time of their birth. In many instances, the mother dressed or permitted the child to dress, in female clothing until school age or even later. It should be noted here that it is extremely difficult to determine, in the absence of an analysis of the mother, just how much of this behavior was generated by the mother herself and how much was the mother's response to the child's needs and wishes. It would seem that a study of the parents' personalities would be extremely enlightening in understanding the development of gender role in these patients. (See Chapter 8 by Stoller.)

Among the transsexual subjects, there is a fair amount of paranoid ideation in reactions to the TAT cards, ranging from mild suspiciousness of authority figures to quite frank delusions of persecution. Some of these patients have been arrested and put in jail for female impersonation per se, and others for female impersonation which the police thought was a disguise in the commitment of other crimes, particularly burglary. Since they are frequently and quite frankly breaking the law in their transvestite activities, it becomes almost a necessary defense for survival to be cautious and even suspicious of the plain-clothes detectives who continually try to identify them. There are even official mistakes such as a somewhat masculine-looking genetic female patient who has been arrested several times, dressed in female clothing, and suspected of being a genetic male impersonating a female.

However, some of the more emotionally disturbed patients see fate or nature as the villain who has played a cruel trick on them, giving them one set of needs and values with a conflicting physiology. The concept of the inner female self, trapped in the male body is developed in a number of TAT stories.

House-Tree-Person Test

On the House-Tree-Person Test, in response to a request to draw a person, these patients invariably drew a female person first. Figure 2 is typical of the drawings depicting females. They often resemble high-fashion clothing models, gaze at themselves in mirrors, or pose for photographers, and much attention in the drawings is paid to dress, jewelry, and hair style. In reality, these patients are extremely interested in all of the more feminine adornments and they often become employed as hairdressers or involved in cosmetic sales. Many of them questioned this examiner (female) at length on a kind of "between us girls" basis for advice and opinion on their own make-up and dress.

The drawings of the male figure, requested next, consisted of somewhat simple, stereotyped drawings with little interest shown in the figures (see Figure 3). However, there were a few outstanding exceptions. In these cases the figures were drawn with loving care and were identified as love objects. Some resembled candidates for a Mr. America contest and were large, muscular replicas of the Hollywood he-man. Typical comments were "Someday I will be raped, loved, or married by a man (or sometimes men) like this."

Some of these patients have quite a promiscuous period following operation in an attempt to prove that they are acceptable female love and sex objects for males. In some cases, the higher the fee paid, the greater the proof. But in the few cases among this group where this has occurred, this behavior seems to subside as the patient becomes more stable in her female role and seems to seek out not just proof of sexual capacity, but persons who can supply the love and emotional support which most of these patients have seriously lacked all of their lives.

The drawings of houses display some of the classic signs of emotional insecurity and in some other cases they take on the flavor of the patient's concept of ideal future. In such an instance, the house is trimmed with curtains on the inside and flowers on the outside and sometimes a baby carriage is included. The patient states that she hopes for a warm, happy home in which she is married and can perhaps adopt children.

In Figure 5, the interesting dual construction of the house reflects the duality in this patient's life.

The drawings of the tree seem to fall into two general categories. As might be expected, there is quite a number of soft, flowing weeping willows. However, there are also other trees, clearly castrated by the edge of the paper or in the actual drawing per se. However, these differ from the frightened, dead, mutilated, castrated trees that are so often seen in disturbed persons. These trees are more often grand and glorious tree stumps full of life and beauty (Figure 6).

The fifth and last drawing requested was the drawing of the self. These self concepts covered a wide range from the sad, frightened, miserable, poorly dressed male, through concepts of very effeminate looking persons in male clothing, to drawings which were more or less replicas of their own drawings of females. For example, one patient said, "This is how I am" (Figure 7), "but this is how I want to be" (Figure 8). Another patient drew an effeminate self in male clothing, which was quite realistic (Figure 9) but then pointed to his own drawing of a woman (Figure 10) and said that he really preferred to look like that drawing.

In another case the patient had drawn a female (Figure 11) and then drew Figure 12 to depict himself. Nothing could have been much farther from the real life situation, but the similarities to the female drawing should be noted.

On several occasions when this occurred, the patient apologized for failure to make an accurate representation of himself, saying that the drawing was, in any case, a drawing of his true inner self—the way he would look if his true female self were not trapped in a male body.

Not once in this test was a body drawn naked and it is quite clear that these patients have intense disgust for their own male bodies. "I want to get rid of these dirty organs" is a typical comment. They take great care never to view themselves in the mirror unless they are dressed at least to the extent of covering the genital area, and short of a planned sex-change operation, they employ a variety of means to make their organs as inconspicuous as possible by tight underclothing, sanitary napkins, and in a few cases attempted self-mutilation.

A brief survey of a number of previously operated cases gives us reason to believe that changes occur in large areas of these patients' social and personal adjustment after the sex-change operation. Psychological retesting of operated patients, within six months to a year after

their operations, is now under way. It is hoped that this "before" and "after" testing will allow us to observe and identify changes which may have occurred.

SUMMARY

The Wechsler Adult Intelligence Scale, the Thematic Apperception Test and the House-Tree-Person Test have been given to thirty-four male transsexuals. The distribution of intelligence test scores differs from the general population. More than half of the patients were found to have IQ in the Bright Normal Range, and there were six times as many as expected in the Superior Group. On the TAT cards, the transsexuals were highly verbal and very productive. Predominant was an emphasis on love and sex relations. Cards designed for females brought forth more numerous and richer responses than those designed for males. On the House-Tree-Person Test, in response to a request to draw a person, these patients invariably drew a female person first. The females often resembled high fashion clothing models. The drawings of houses gave some of the classic signs of emotional insecurity but in some cases took on the flavor of the transsexual's concept for an ideal future. The drawings of the tree fell into two general categories: soft, flowing weeping willows or those clearly designating castration.

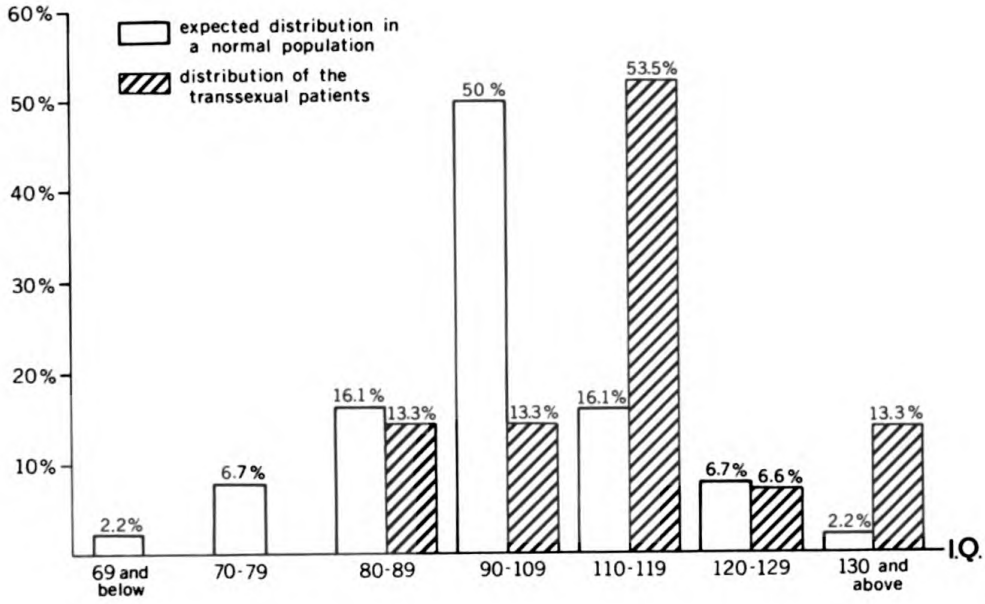

FIGURE 1. Distribution of intelligence test scores of thirty-four transsexual patients, compared to distribution of intelligence test scores for general population.

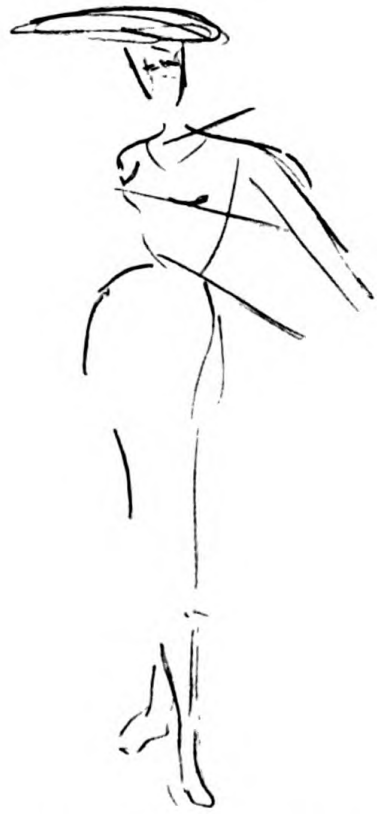

FIGURE 2. Drawing of a female by a transsexual patient (age 32).

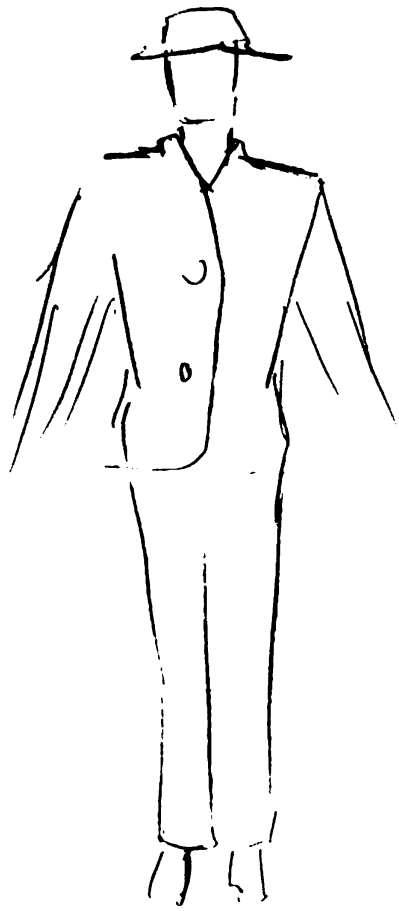

FIGURE 3. Drawing of a male figure by a transsexual patient (age 32). Cf. Figure 2, drawn by the same patient.

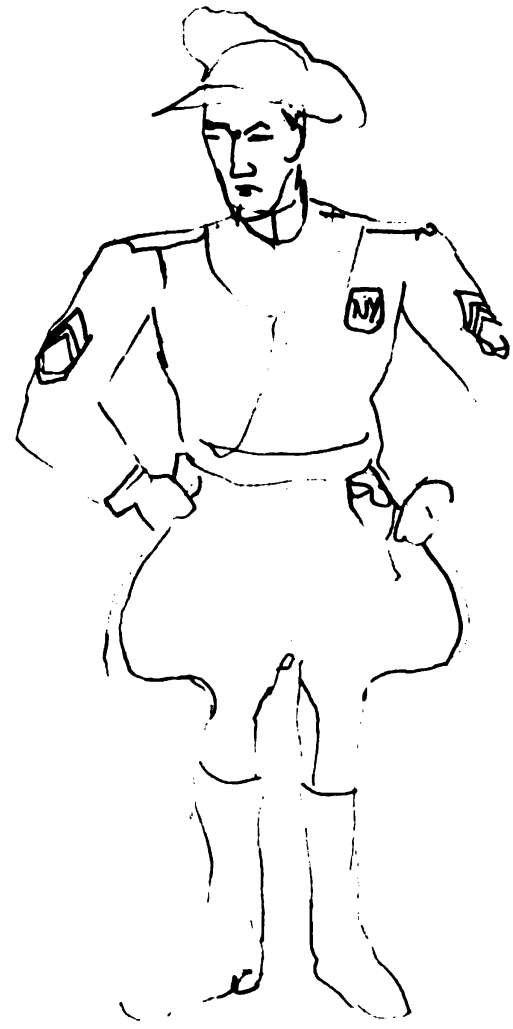

FIGURE 4. Drawing of a male figure, representing a love object, by a transsexual patient (age 43).

FIGURE 5. Drawing of a house, representing an ideal hope for the future, by a transsexual patient (age 42).

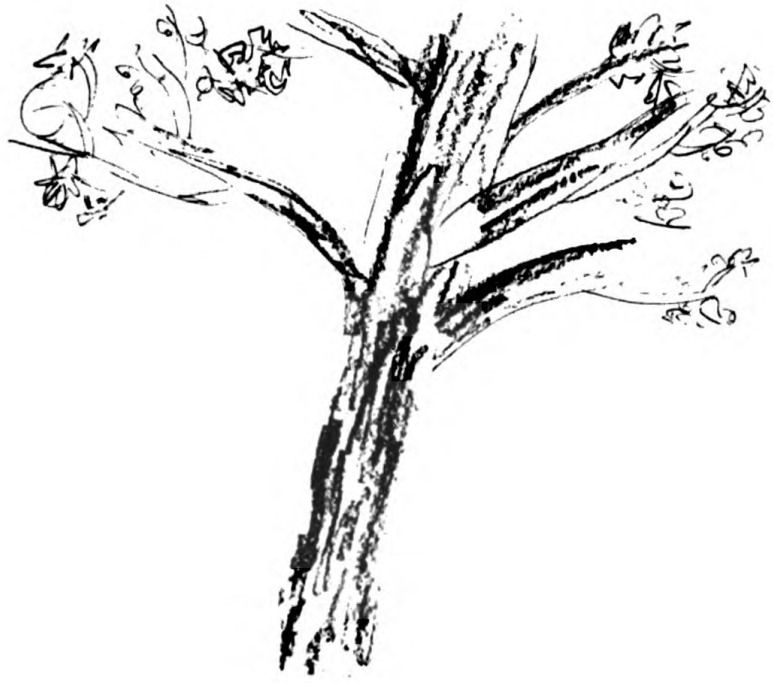

FIGURE 6. Drawing of a tree by a transsexual patient (age 35).

FIGURE 7. Drawing of the self by a transsexual patient (age 59).

FIGURE 8. Drawing of a female figure by a transsexual patient (age 59). Cf. Figure 7, drawn by the same patient.

FIGURE 9. Drawing of the self by a transsexual patient (age 19).

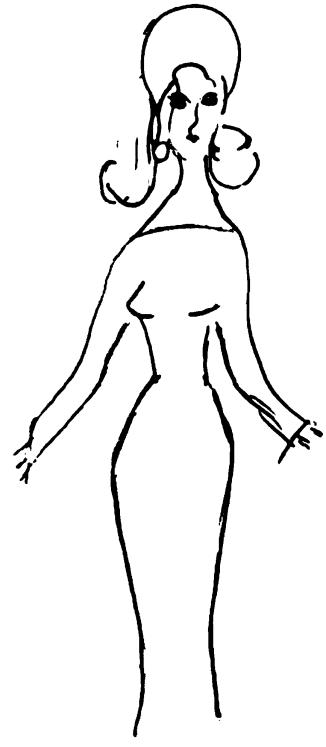

FIGURE 10. Drawing of a female figure by a transsexual patient (age 19). Cf. Figure 9, drawn by the same patient.

FIGURE 11. Drawing of a female figure by a transsexual patient (age 43).

FIGURE 12. Drawing of the self by a transsexual patient (age 43). Cf. Figure 11, drawn by the same patient.

PART III

SOMATIC ASPECTS OF TRANSSEXUALISM

CHAPTER 12

STUDIES OF ANDROGENS IN MALE TRANSSEXUAL SUBJECTS: EFFECTS OF ESTROGEN THERAPY

Claude J. Migeon, M.D., Marco A. Rivarola, M.D.,
and Maguelone G. Forest, M.D.

The psychosexual inversion in the male transsexual, who is defined as a physically normal male "who wants to be a woman in appearance as well as function and wants medical science to make him such as far as that is possible" (Benjamin, 1966), leads often to requests for estrogen treatment as a first step toward total physical transformation. The present study was devised to determine the hormonal status of male transsexual patients prior to and during estrogen therapy.[1]

Subjects and Methods

Normal Subjects

The control subjects, six male and six female, were staff members, medical students, nurses, and laboratory technicians. One male subject in this group and two female subjects have been studied previously (Rivarola, Saez, Meyer, Jenkins and Migeon, 1966). All of them were considered as having normal endocrine function. The females had normal, regular menses, but no effort was made to carry out the studies at a specific time of the cycle.

Transsexual Subjects

The fourteen subjects were patients seen and studied at the Gender Identity Clinic of The Johns Hopkins Hospital. Their age range was nineteen to thirty-nine years, ten patients being less than thirty years old.

[1] The authors wish to express their appreciation to Drs. D. Blumer, M. T. Edgerton, J. E. Hoopes, H. W. Jones, Jr., N. J. Knorr, E. Meyer, J. W. Money, H. K. A. Schirmer, and Mr. C. F. Velkas for their cooperation. Thanks are also due to Mrs. Betty Lawrence and Miss Shirley Brantley for their technical assistance and to Miss Kathleen Scheller for her secretarial assistance.

Three of the subjects were Negro (Nos. 5, 11, and 12), one was Asiatic (No. 13) and the others were Caucasian.

Patients Nos. 1 to 5 were studied prior to any hormonal treatment, whereas patients Nos. 6 to 14 were studied only during estrogen therapy. The estrogenic preparations were varied (Premarin® or Diethylstilbestrol®, orally; Depo®-estradiol cypionate, intramuscularly) but were administered in large doses and for more than one year in all cases.

Urinary Excretion of Steroids and Gonadotropins

The urinary excretions of 17-ketosteroids (17-KS) and of 17-hydroxycorticosteroids (17-OHCS) were determined by a modification of the method of Callow, (Callow and Emmens, 1938) and by a modification (Kenny, Malvaux and Migeon, 1963) of the technique of Glenn and Nelson (1953), respectively. The urinary excretion of pregnanediol (P'diol) and pregnanetriol (P'triol) were estimated by the methods of Klopper, Mitchie and Brown (1955), and of Bongiovanni and Eberlein (1958), respectively. The technique of Brown, Bulbrook and Greenwood (1957) was used for urinary estrogens.

The urinary excretion of gonadotropins was measured by a modification (Bradbury, Brown and Brown, 1949) of the method of Klinefelter, Albright and Griswold (1943).

Plasma Concentrations of Testosterone (T), *Androstenedione* (△), *and Dehydroisoandrosterone* (D)

These concentrations were determined by a double isotope derivative method previously described (Rivarola and Migeon, 1966; Rivarola, Saez, Meyer, Kenny, and Migeon, 1967) on plasma samples collected between 9 and 10 a.m.

Determination of Metabolic Clearance Rate (MCR), *Blood Production Rate* (PB), *and Blood Interconversion of* T *and* △

The MCR[2] of T and △ and their blood interconversion, calculated from their transfer constants ([ρ] BB) were determined after administration of a constant infusion of ^{3}H-testosterone and ^{14}C-androstenedione according to a technique described elsewhere (Rivarola, Saez, Meyer, Jenkins and Migeon, 1966).

[2] $\text{MCR (L/day)} = \frac{R}{C_r} \times 1.44$

where R = rate of radioactive infusion in cpm/min.; C_r = plasma radioactive concentration in cpm/ml at equilibrium.

PB (mg/24 hrs.) = MCR × C

where C = plasma hormone concentration in mg/L.
[ρ] $BB^{T\Delta}$ = transfer constant from blood T to blood △.
[ρ] $BB^{\Delta T}$ = transfer constant from blood △ to blood T.

Determination of the Percentage Binding of T, Δ, *and* D *to Plasma Proteins*

The percentage binding of androgens to plasma proteins was determined by equilibrium dialysis for 15 hours, at 37°C, with plasma diluted 1:5 (Forest, Rivarola and, Migeon, 1968).

RESULTS

Urinary and Plasma Steroids in Untreated Transsexual Subjects

Only five patients could be studied prior to any estrogen treatment. The results are shown in Table 1. The urinary excretion of 17-KS, 17-OHCS, pregnanediol, pregnanetriol and estrogens were within the limits of the range reported for normal adult males (Klopper, Michie and Brown, 1955; Bongiovanni and Eberlein, 1958; Brown, Bulbrook and Greenwood, 1957; Migeon, Green and Eckert, 1963). The only exception was an elevated excretion of pregnanediol in patient No. 1. The plasma concentration of T, Δ, and D were also within normal limits (Rivarola, Camacho and Migeon, 1968). In the five patients, the urinary gonadotropin assay was positive up to 6.6 or 13.2 mouse units and negative for 26.4.

Plasma Androgens in Transsexual Subjects Treated with Estrogens

As can be seen in Table 2, estrogen therapy resulted in a marked decrease in plasma T and the mean value for the ten patients was not statistically different from that obtained in normal female subjects. The values of Δ and D remained in the range observed in male individuals.

Percentage Binding of Plasma Androgens in Transsexual Subjects

The mean and standard deviation for the percentage binding of T, Δ, and D in normal males were 92.78 ± 1.56, 75.83 ± 2.76 and 89.92 ± 1.51 respectively. The five untreated patients had values which were all within the normal range.

When compared to normal males, the percentage binding of T and of D in estrogen-treated patients were significantly increased (mean ± 1 S.D., 98.64 ± 0.24, and 92.49 ± 1.12 respectively, with a p value of <0.01 in both cases). However there was no change in percentage binding of Δ. It must be noted that the results obtained in patients treated with estrogens were similar to those observed during pregnancy (Forest, Rivarola and Migeon, 1968).

Metabolic Clearance Rate (MCR) *of* T *and* Δ

The values observed in twelve normal male and female subjects are shown in Table 3. When the metabolic clearance rates were expressed in liters per M^2 of body surface area per 24 hours, MCR (Δ) for males

and females were not significantly different, whereas MCR (T) for the females remained statistically lower than for males ($p < 0.01$).

The results obtained in five male transsexual patients treated with estrogens are listed in Table 4. Their MCR (T) were one half those of the normal males and slightly lower than those of normal females ($0.02 < p < 0.05$). However when expressed as $L/M^2/24$ hours, the MCR (T) of the estrogen-treated transsexuals were statistically lower than those of normal women ($p < 0.01$). In contrast, MCR (Δ) of the transsexuals were similar to those of the normal males. These effects of estrogen treatment on the metabolic clearance rates of T and Δ are particularly striking when considering the ratios MCR (Δ)/MCR (T); the means (+ 1 S.D.) of the control males, control females, and estrogen-treated transsexual males were 1.80 ± 0.36, 2.33 ± 0.24, and 3.82 ± 0.48 respectively.

Blood Production Rate (PB) *of* T *and* Δ

The mean $\pm$ 1 standard deviation for PB (T) in normal males and females were 6.5 ± 1.6 and 0.32 ± 0.07 mg per 24 hours respectively, while those of PB (Δ) were 2.5 ± 1.0 and 3.0 ± 0.7 mg per 24 hours respectively (Table 3). The estrogen-treated transsexual males had a PB (T) and PB (Δ) in the range of those in normal females (Table 4).

Blood Interconversion of T *and* Δ

The transfer constant [P] $BB^{T\Delta}$ ($\times$ 100) was 6.2 ± 2.5 in the normal males and 7.9 ± 2.7 in the normal females. This constant in the transsexual males treated with estrogen was markedly increased (mean $\pm$ 1 S.D. $= 22.8 \pm 9.4$).

Discussion

It is a common observation that most transsexual males have a rather weak sexual drive. Benjamin (1964) has reported that several of his patients presented some degree of sexual under-development as judged by low sexual drive. On the other hand, in his review of one hundred patients with transsexualism, Pauly (1965) reported that the urinary excretion of 17-ketosteroids was within normal limits in the subjects in whom this assay was carried out. In the present study, we measured not only urinary 17-ketosteroids, which is a poor index of androgenicity, but we also determined T concentration in plasma. The five individuals studied had normal T concentration showing that hypogonadism is certainly not a pre-requisite for transsexualism. Blood production rates of T and Δ were determined in patient No. 1 (a subject of Rivarola, Saez, Meyer, Jenkins, and Migeon, 1966) and were within normal range.

Estrogen administration is known to be a potent inhibitor of pituitary secretion of gonadotropins. This therapy in our patients resulted in

plasma concentrations of T which were similar to those of normal female subjects suggesting that there was an almost complete inhibition of luteinizing hormone secretion. Estrogen treatment, in this study, produced also an increase in percentage binding of T, the mean being significantly greater than those of normal males and normal females. In a previous study, we have calculated the amount of unbound T in normal subjects, the values for males and females being 8.28 and 0.44 mμg per 100 ml of plasma, respectively (Rivarola, Forest, and Migeon, 1968). Using a similar calculation, the unbound T of estrogen-treated transsexuals would be 0.15 mμg per 100 ml of plasma. There is evidence that only unbound cortisol in plasma is biologically active (Slaunwhite, Lockie, Back, and Sandberg, 1962). If the same applied to unbound T, then transsexuals receiving estrogens have a plasma concentration of biologically active T of $\frac{1}{3}$ that of normal females. It must be stressed that the above calculation uses a percentage T binding obtained under *in vitro* conditions and extrapolates these results to *in vivo* conditions. Therefore, such an extrapolation is not necessarily valid.

Our values for MCR (T) in normal subjects are similar to those reported by Bardin and Lipsett (1967) and Southren and co-workers (1967), but are somewhat higher than those reported by Longcope (personal communication). It is of interest that estrogen treatment in our male transsexuals resulted in a marked decrease in MCR (T) without any change in MCR (Δ). The lower MCR (T) in our patients could be related to their increased percentage T binding, just as the difference in MCR (T) observed in normal male and female subjects. On the other hand, the studies of Southren's group (1967) suggest that MCR (T) is related to the level of circulating T. Our patients had low plasma concentration of T and this could also explain their decreased MCR (T).

Another remarkable finding in the estrogen-treated transsexuals was the increased transfer constant of blood T to blood Δ ($[\rho]\,BB^{T\Delta}$). As shown by Horton and Tait (1966), the contribution of PB (T) to PB (Δ) can be calculated from the expression:

$$\frac{[\rho]\,BB^{T\Delta} \times \dfrac{PB\ (T)}{PB\ (\Delta)}}{1 - [\rho]\,BB^{T\Delta} \times [\rho]\,BB^{\Delta T}}$$

Using mean values, the PB (T) of the estrogen-treated patients contributed 0.064 mg to the PB (Δ), or 3.05 percent of the PB (Δ), whereas it contributed only 0.025 mg, or 0.85 percent of the PB (Δ) in normal women. Despite the marked increase of $[\rho]\,BB^{T\Delta}$ in subjects receiving estrogens, the contribution of PB (T) to PB (Δ) was relatively small, due to the fact that the PB (T) itself was low. In the normal males, on the other hand, the contribution of PB (T) to PB (Δ) was

Table 1
Urinary and Plasma Steroids in Untreated Transsexual Subjects

Patients		Urinary Steroids (mg/24 hrs.)				Urinary Estrogens (μg/24 hrs.)			Plasma Androgens (mμg/100 ml.)		
Number	Age	17-KS	17-OHCS	P'diol	P'triol	E_1	E_2	E_3	T	Δ	D
1	19	11.6	5.5	4.8	2.6	9	6	7	917	130	554
2	39	12.5	6.1	0.8	1.0	3	1	4	590	110	668
3	31	6.8	5.9	1.1	1.3	4	5	2	473	120	284
4	24	8.7	5.2	0.5	0.4	2	0	5	616	254	—
5	24	14.8	8.0	0.9	1.8	1	2	10	441	165	980
Normal males range or mean ±1 S.D.		6–18	4–9	0.4–1.4	up to 2.5	3–8	0–6	1–11	557 ± 110	107 ± 47	540 ± 145

much greater (0.4 mg or 16 percent of the PB (Δ)) despite a low transfer constant.

Using also mean values, the PB (Δ) of the estrogen-treated patients contributed 0.059 mg to the PB (T), (or 21.4 percent of the PB (T)) whereas it contributed 0.12 mg (or 37.5 percent of the PB (T)) in normal women. Since T has an androgenic potency much greater than that of Δ, a decreased contribution of PB (Δ) to PB (T) along with an increased contribution of PB (T) to PB (Δ) in estrogen-treated transsexuals could be of biological importance by favoring Δ in the T—Δ interconversion.

The present study suggests that the effects of estrogen therapy on the androgenic status of a subject are due to several factors: 1) A decreased secretion of T, probably secondary to inhibition of ICSH output; 2) a decrease in percentage of unbound T; and 3) a T—Δ interconversion favoring Δ.

SUMMARY

Five male transsexual patients were found to have normal plasma and urinary steroids, particularly normal concentration of testosterone (T) in blood.

Administration of estrogens to male transsexual subjects resulted in a marked decrease in plasma T, metabolic clearance rate of T and blood production of T, without any change in androstenedione or dehydroisoandrosterone. Estrogen therapy also produced a significant increase in percentage binding of T to plasma proteins, resulting in a concentration of unbound T in plasma which was lower than that of normal female subjects.

Table 2
Plasma Androgens in Male Transsexual Patients Treated With Estrogens

Patient		Plasma Androgens (mμg/100 ml)		
Number	Age (years)	T	Δ	D
5	24	37	37	975
6	29	94	99	574
7	32	47	100	455
8	23	54	119	253
9	24	40	106	—
10	22	64	152	1,054
11	34	40	75	271
12	28	102	—	916
13	19	35	46	627
14	23	50	188	335
Mean ± 1 S.D.		56 ± 24	102 ± 48	607 ± 310
15 normal females mean ± 1 S.D.		48 ± 14	180 ± 59	534 ± 157

Table 3

Metabolic Clearance Rates (MCR), Plasma Concentrations (C), Blood Production Rates (PB), and Transfer Constants ([p]) BB) of Testosterone and Androstenedione in Normal Adult Subjects (Mean ± 1 S.D.)

MCR (T) L/24 h. (L/M²/24 h.)	C (T) mμg/24 h.	PB (T) mg/24 h.	MCR (△) L/24 h. (L/M²/24 h.)	C (△) mμg/24 h.	PB (△) mg/24 h.	$\frac{\text{MCR (△)}}{\text{MCR (T)}}$	[p]$BB^{T\triangle}$ (× 100)	[p]$BB^{\triangle T}$ (× 100)
Six normal males (25 to 32 years)								
1146 ±133 (591 ±51)	568 ±155	6.5 ±1.6	2049 ±395 (1057 ±184)	118 ±35	2.5 ±1.0	1.80 ±0.36	6.2 ±2.5	5.0 ±1.4
Six normal females (21 to 34 years)								
627[1] ±107 (392 ±50)	52[1] ±11	0.32[1] ±0.07	1447[1] ±192 (905 ±59)	209[1] ±54	3.0 ±0.7	2.33[1] ±0.24	7.9 ±2.7	4.0 ±1.0

[1] Female values are significantly different from male values.

Table 4
Metabolic Clearance Rates (MCR), Blood Production Rates (PB) and Transfer Constants ([p] BB) of Testosterone and Androstenedione in Estrogen-Treated Transsexual Patients

Patient Number	MCR (T) L/24 h. (L/M²/24 h.)	PB (T) mg/24 h.	MCR (Δ) L/24 h. (L/M²/24 h.)	PB (Δ) mg/24 h.	MCR (Δ) / MCR (T)	[p] $BB^{T\Delta}$ (× 100)	[p] $BB^{\Delta T}$ (× 100)
6	495 (278)	0.46	2149 (1207)	2.1	4.35	15.2	2.9
7	383 (212)	0.18	1571 (868)	1.6	4.10	18.8	3.2
8	611 (355)	0.33	1876 (1091)	2.2	3.07	37.7	3.0
9	435 (256)	0.12	1623 (955)	1.7	3.73	26.3	3.3
10	488 (274)	0.31	1890 (1062)	2.9	3.87	16.1	1.8
Mean ± 1 S.D.	482 ± 85 (275 ± 52)	0.28 ± 0.04	1822 ± 233 (1037 ± 130)	2.1 ± 0.5	3.82 ± 0.48	22.8 ± 9.4	2.8 ± 0.6

CHAPTER 13

TRANSSEXUALISM, SEXUAL DYSFUNCTION, AND TEMPORAL LOBE DISORDER[1]

Dietrich Blumer, M.D.

Temporal Lobe Disorder, Hyposexuality, Transvestism, and Other Sexual Aberrations: A Review

The role of the temporal lobes in the regulation of sexual behavior has been well documented. In what is now a classic experiment, Klüver and Bucy (1939) showed that bilateral temporal lobectomy in primates results in hypersexual behavior. The same procedure in man has been reported to have the same effect (Terzian, 1958). Conversely, hyposexuality pertaining to sexual interest and activity alike has been found in more than half of the patients with temporal lobe epilepsy of some duration and severity (Blumer and Walker, 1967; Gastaut and Collomb, 1954). This global hyposexuality may be relieved by the successful—usually surgical—treatment of the epilepsy (Blumer and Walker, 1967; Gastaut and Collomb, 1954; Savard and Walker, 1965). The sexual changes appear to be related to the effect on the medial temporal structures of the presence or absence of seizure discharges.

Several reports suggest that various other sexual aberrations may be related to brain and particularly to temporal lobe dysfunction. All of the published reports reviewed below happen to refer to male patients; it appears that the coincidence of sexual aberration (except for hyper- and hyposexuality) has not been observed in females. More often than other sexual deviations, fetishism and transvestism have been reported in men with electroencephalographic abnormalities and/or epilepsy. Epstein (1961) has reported a case of fetishism, two cases of fetishism-transvestism, and a case of transvestism, all with epileptic foci in the temporal lobes. One of the four had overt seizures. Davies and Morgen-

[1] The author wishes to thank Dr. A. E. Walker and Dr. E. Niedermeyer for their collaboration and advice in the preparation of this paper.

stern (1960) have reported four cases of transvestism with temporal lobe foci, three of them having overt seizures. Wålinder (1965) has reviewed the pertinent literature and has reported on twenty-six cases of transvestism who were examined electroencephalographically. Twelve patients had abnormal records and six patients had "probably normal" records. In eight out of the eighteen records which were not completely normal, the abnormality was present in one or both temporal lobes. However, the electroencephalographic evidence was not further described. Wålinder also reports that a man with normal psychosexual development until the age of twenty-three became a transvestite some five years after severe cerebral concussion. An abnormal EEG was the only remarkable physical finding, and anticonvulsant medication led to a dramatic improvement of the sexual behavior.

A more than incidental association of transvestism and paroxysmal cerebral disorder is clearly suggested by the case of temporal lobe epilepsy reported by Davies and Morgenstern. In this patient the desire to transvest would be preceded by the aura of epigastric sensations but later the desire occurred without the aura and became more persistent. Hunter, Logue, and McMenemy (1963) reported a patient with transvestism and fetishism present since age nine, in whom temporal lobe epilepsy developed at age twenty-nine. Exacerbation of the abnormal sexual behavior coincided with a marked increase in the attacks. Both the sexual aberration and the epilepsy were at first temporarily improved by anticonvulsant medication, and then eliminated by left temporal lobectomy at age thirty-nine. This case is comparable to that of Mitchell, Falconer, and Hill (1954), who report that the patient's viewing of a fetish object (a safety-pin) became the invariable trigger of temporal lobe seizures at some time between the ages of eight and eleven years. During postictal confusion the patient later on occasionally dressed himself in his wife's clothing. A left temporal lobectomy, at age thirty-eight, relieved both the epilepsy and the fetishism.

In all these patients, who were characterized by apparently more than incidental association of sexual deviation and temporal lobe epilepsy, the loss of normal sexual interest was accompanied by the loss of the ability to have erection and orgasm, a condition commonly found in temporal lobe epilepsy. With relief of the epilepsy and the return of normal sexual interest, there was a restoration of normal sexual potency.

Little evidence can be found concerning sexual aberrations associated with temporal lobe dysfunction other than transvestism and fetishism. Hill, Pond, Mitchell, and Falconer (1957) reported increase in sexual drive and potency in thirteen of twenty-seven patients who had undergone temporal lobectomy for epilepsy, and also noted that three patients who formerly had a tendency to "perverse" sexual activity acquired a normal libidinal interest and activity after the operation. One of these

three was the safety-pin fetishist whose case has been described above. They did not describe the type of aberration in the other two cases. One of the two, however, was briefly described by Pond and Bidwell (1954): a boy who at age thirteen came for investigation "with the reputation of being a liar, bad-tempered, and sexually perverse." The nature of the perversion is not described. Following left temporal lobectomy his behavior reportedly was very much improved, but it is not reported whether the perversion was fully eliminated. It appears that the third case of Hill, *et al* is identical with the transvestite briefly described (as Case Two) by Davies and Morgenstern. This man also had some homosexual experiences while in the Army. Following operation at age thirty-five he recovered completely from the epilepsy and showed some definite improvement of his sexual behavior while also undergoing psychoanalytical treatment.

In a series of sixty temporal lobe epileptics at Johns Hopkins of whom forty-two were surgically treated, we found three patients with sexual deviations. Two patients, age thirteen and thirty-seven at the time of operation, had shown homosexual behavior. In both cases, this behavior was no longer present after temporal lobectomy, although only the younger of the two was greatly improved as far as the seizure condition was concerned. This younger patient was remarkably similar to the case described by Pond and Bidwell (1954). The older patient completely gave up his former promiscuous homosexual activities and began to practice frequent cunnilingus—besides regular sexual intercourse—with his spouse. Neither patient was significantly hyposexual. The third patient had had temporal lobe seizures since age eighteen and was evaluated at age twenty-two. He had reached puberty at age twelve, but had never experienced either a full erection or an ejaculation, and showed minimal interest in girls. He recalled how at age twelve he had experienced some pleasurable feeling with partial erection by putting on his baby sister's diapers, and hastened to say that he did not remember doing this more than once. This infantile sexual behavior could possibly be referred to as transvestite behavior in nucleo. It represented the only remarkable sexual activity in the life of this clearly hyposexual young man.

It appears that among sexual aberrations in patients with temporal lobe disorders transvestite behavior occurs most frequently. Fetishism and fetishism–transvestism may also occur, and homosexual behavior is occasionally found. Hypersexuality associated with temporal lobe disorder occurs more frequently than any of the sexual deviations we have dealt with. It may occur postictally and in previously hyposexual temporal lobe epileptics following temporal lobectomy (Blumer and Walker, 1967). This kind of hypersexuality bears no direct relationship, however, with transsexualism, and will not be discussed further here.

EEG Findings and Epilepsy in Transsexuals

EEG Findings in a Series of Transsexuals

In view of the documented occasional association of transvestism and electroencephalographic abnormalities, it appeared worthwhile to investigate the electroencephalographic patterns of another closely related group of patients, the transsexuals. EEG tracings were done on fifteen transsexuals who were evaluated by the Gender Identity Committee of The Johns Hopkins Hospital. The records were obtained utilizing twenty-one lead EEG, with international placement and bipolar referential technique. The patients were recorded awake, drowsy, and asleep, with hyperventilation and intermittent photic stimulation. Chloral hydrate, 1.5 to 3 grams, was given, if necessary, to induce sleep. The records were read by Dr. Ernst Niedermeyer, head of the EEG laboratory at The Johns Hopkins Hospital.

The EEG of ten patients was judged to be within normal limits and unremarkable. In one of these patients no sleep tracing was obtained, and another was recorded while drowsy but with no definite evidence of sleep. All ten patients are male transsexuals.

EEG findings and pertinent clinical data on the other five patients are reported in Table 1. Two of the five are female transsexuals.

Table 1
EEG Findings in Five Transsexuals

Patient	EEG	Clinical Findings
1. H.L. age 33 male	Rightsided alpha-depression: WITHIN NORMAL LIMITS OF VARIABILITY	
2. N.N. age 31 male	Greater than average content of fast activity: WITHIN NORMAL LIMITS OF VARIABILITY	Head injury at age 18; lack of genito-pelvic sexual arousal since age 26
3. M.H. age 38 female	Some left temporal slowing: WITHIN NORMAL LIMITS OF VARIABILITY	
4. S.R. age 31 female	6 per second positive spikes and a few dubious 14 per second positive spikes during light drowsiness: SLIGHTLY ABNORMAL	Lack of any genito-pelvic sexual arousal
5. J.N. age 50 male	Runs of anterior temporal and mid-temporal slow and minor sharp activity, clearly more over the left side: MODERATELY ABNORMAL	Hypertension

A neurological inventory revealed that two of the fifteen transsexuals had suffered head injuries with coma of several hours duration at the ages of fifteen and eighteen, respectively. However, in both cases, the definite wish to be a woman dated back to early childhood. The EEG

was interpreted as unremarkable in one patient, and as falling within broad normal limits of variability in the other (N.N., in Table 1).

The size of the sample studied precludes definite conclusions. It appears, however, that definite EEG abnormalities are not a common occurrence in transsexuals. Ten of the fifteen records were unremarkable. Three records fell within the limits of variability, a fourth record was judged slightly abnormal, and a fifth one moderately abnormal (see Table 1). This last record (J.N.) shows a type of abnormality common in diffuse cerebro-vascular disorders and might be due to the patient's hypertension. It may be noteworthy that two of three patients who prior to any hormone treatment were clearly hyposexual as far as the desire and the ability to have erection and orgasm are concerned (N.N.; S.R.) had records which were unusual in some aspects. Both female transsexuals fell into the same category (M.H.; S.R.). A suggestion of temporal lobe disorder was present in two patients (M.H. and J.N.).

Transsexuals with Epilepsy

We studied three epileptic patients who first came to our attention because they had the desire to change their sex from male to female. They all had the rather typical history of transsexuals with desire to be accepted as females since childhood. The first patient (Case One) applied for sex-reassignment surgery at The Johns Hopkins Hospital and had mentioned in his letter that he suffered from seizures. His history and EEG record was secured through the cooperation of Dr. Ira Pauly. The second patient arrived in Baltimore seeking sex-change surgery and was treated in the emergency room of The Johns Hopkins Hospital because of a seizure. His EEG was obtained here. The last patient was known to Dr. John Money from a previous evaluation. His EEG was obtained from a hospital in the patient's home town.

Case One. Age sixty-six, Caucasian. Hypertension was diagnosed at age sixty-three. Shortly thereafter he had the first of his few seizures, probably of the grand-mal type. He had a jail record for passing bad checks and a past history of alcohol addiction.

An EEG recorded at age sixty-five showed slowing and mild voltage depression over the right hemisphere, with a maximum of slowing in the right temporal region.

Case Two. Age twenty-two, Negro. At age six he suffered a head injury without unconsciousness. Seizures had occurred since age ten, at an average of eight per month. An attack observed at The Johns Hopkins Hospital consisted of turning of eyes and head to the left, with loss of consciousness but absence of clonic movements. He had a jail record for breaking and entering.

The EEG was abnormal due to a slightly excessive slow activity for age, possibly due to a hypnotic drug. No focal abnormality and no evidence of a seizure disorder were noted.

Case Three. Age fifty-one, Caucasian. He has a Klinefelter syndrome with very small testes, chromatin positive buccal smear, gynecomastia, sparse normal beard, and normal penis. A head injury at age fourteen was not followed by coma. At age sixteen his first "blackout" occurred and further attacks not preceded by any warning occurred about every two weeks for twelve years, until anticonvulsant medication was given. Good relief from attacks with medication has persisted ever since.

An EEG taken at age thirty-four showed increased generalized slow activity, no focal abnormality, and no evidence of a seizure disorder.

In spite of the absence of specific epileptic EEG changes, there is no reason to doubt the epileptic nature of the attacks of these three patients. The history of hypertension and EEG record of Case One appear very similar to the patient J.N. from the non-epileptic series.

CONCLUSION

A review of our present knowledge of temporal lobe dysfunction and sexual aberrations provides good evidence for an occasional close relationship between sexual aberrations (transvestism in particular) and paroxysmal temporal lobe disorders. Of particular interest is the fact that an inability or greatly impaired ability to have erection and orgasm was found in all the patients in whom transvestism was associated with temporal lobe epilepsy. Lack of normal genital sexual arousal and orgasm may provide the substrate for abnormal sexual tendencies. By the same token, if the treatment of temporal lobe epilepsy is successful and normal sexual responses are restored, there may be no further manifestation of abnormal sexual modes of satisfaction. In this way previously intractable transvestism and fetishism may be eliminated.

A series of fifteen transsexuals did not show a high incidence of EEG abnormalities. In spite of this essentially negative finding, it still appears worthwhile to examine the EEG in transsexuals, if only to find the occasional one with an abnormality. Even without systematic search, it was possible to find three transsexuals who had epilepsy. More intensive EEG studies with repeat tracings, metrazol stimulation, and sphenoidal leads should be undertaken in order to clarify the nature of the seizure disorder in such cases. The question of a possible high incidence of epilepsy among transsexuals can only be answered when a large series has been systematically examined.

Theoretically, it should be possible to repeat the successful treatment of sexual aberration and temporal lobe epilepsy by temporal lobectomy in suitable transsexual patients. Persons with medically intractable epilepsy, a well localized epileptogenic focus, and a willingness to undergo this type of surgery would be candidates. A lobectomy, which might restore normal sexual functions, would undoubtedly be preferable in such cases to sex-reassignment surgery.

The hyposexuality of the temporal lobe epileptic concerns sexual interest and desire, genital arousal and orgasm alike. Lack of genital arousal and orgasm is frequently found in transsexuals, and an effect of the sex-reassignment operation in establishing the ability to experience an orgasm remains to be further investigated, preferably by direct observation techniques (Masters and Johnson, 1966) as well as by careful interviews. This marked sexual insufficiency is frequently overlooked in these patients who offer so many other, more striking, facets of sexual behavior. It may be assumed that the male transsexual's desire to be female may lead to loss of erection and orgasm, as anything connected with the person's own male organ arouses a feeling of disgust. On the other hand, it may be assumed that an inherent weakness of male genital powers may promote the overwhelmingly female orientation of some transsexuals. At least in the case of the temporal-lobe epileptic with sexual aberration we can assume that a primary neurophysiological disturbance is the basis of hyposexuality.

CHAPTER 14

TRANSSEXUALS: PHYSICAL CHARACTERISTICS, PARENTAL AGE, AND BIRTH ORDER

Jan Wålinder, M.D.

Physical Characteristics and Body Measurements in a Series of Thirty Male and Thirteen Female Transsexuals

Physical Characteristics

Thirty male and thirteen female transsexuals have been examined. Among other things, physical characteristics and body measurements were noted and each patient's general body build, height and weight, and general physical and neurologic state were recorded. In men, the appearance of the external genitals, size and consistency of the testes as far as could be judged subjectively (Lindegård, Morsing and Nyman, 1956), size and consistency of the prostate as judged subjectively, type and amount of pubic hair, and the presence or absence of gynecomastia were observed. In women, gynecologic state as evaluated by a gynecologist, type and amount of pubic hair, size and consistency of breasts as judged subjectively, and hirsutism were noted. When patients had been treated with hormones, allowance was made for the variables which might have been affected by the treatment. The patients themselves were asked if they had been given hormones, and their responses were confirmed by questioning their physicians.

Two patients had a dysplastic body build. Otherwise, nothing remarkable was observed in the general build, weight, or height of these patients, the values being normal for the age and sex in each case. The physical and neurologic examinations revealed in one case slight paralysis of the left abducens nerve, but no other neurologic abnormality; dorsal kyphoscoliosis, bilateral nystagmus, and reduced vision in the left eye were present in another case.

The following deviating characteristics were noted in the men: The penis was of infantile appearance in one man, who also had a shrunken

scrotum and non-palpable prostate; an operation done previously for undescended testes had revealed bilateral testicular atrophy. In another case, the testes were of extremely soft consistency, though of normal size. In about nineteen percent of the males, the pubic hair was of feminine appearance and distribution, which is marked by a straight transverse or slightly rounded upper outline and no sign of extension toward the umbilicus. One man lacked all signs of a beard, and two men had only a suggestion of a beard; these two patients have never shaved, while two other men shaved only once a week. One man had distinct gynecomastia of the left breast and another man had very sparse axillary hair.

In the women, nothing distinctly abnormal was noted on gynecologic examination. Two women had pubic hair of male type extending to, or almost to, the umbilicus; two women had infantile breasts; and one woman showed luxuriant hair around the areolae and hair in the sternal region.

Body Measurements

In 1951 Tanner constructed a formula for the ratio between the bi-iliac/biacromial breadth for discriminating between the sexes. Lindegård (1953) doubted whether the relationship between two correlated variables could be expressed as a simple ratio and instead worked out a system for comparing body dimensions by means of regression analysis. Studying representative groups of nearly two hundred men of about twenty-one years of age, and of nearly three hundred women of about twenty-four years, he found from regression analysis, that the sexes differed in their arithmetic means for different measurements as well as in various ratios between these measurements. Among other things he noted that, given the same length of the tibia, the radius was longer in men than in women, that is, women had shorter arms in proportion to their legs than did men. He also noted that the biacromial breadth was greater in relation to the length of the radius and tibia in men than in women, whereas the bi-iliac breadth was greater in relation to the length of the radius in women than in men.

The following relationships were calculated for all forty-three transsexual subjects of this study: The length of the radius/length of tibia; biacromial breadth/length of radius; biacromial breadth/length of tibia; bi-iliac breadth/length of radius; and bi-iliac breadth/length of tibia. The procedures used were those of Martin (1928). Each measurement was made twice in succession, and the average used to represent the patient. The numerical values for the various cases were then plotted around Lindegård's regression lines in graphs containing the values for once and twice the standard deviation for the variable represented on the ordinate. The results are shown in Figures 1-10. As a rule, about two-thirds of the observations fell within one standard deviation from the mean, that is, they were

distributed about the same as in the general population. However, female transsexuals differed from male transsexuals in their distribution around the regression lines as follows: Figure 4, showing the regression of the biacromial breadth on the length of the radius, shows that only three of the thirteen values for the women fell under the regression line, while ten fell above it. Thus the female group tended to have a larger biacromial breadth in relation to the length of radius than women in the general population have. The same was true of the ratio between the biacromial breadth and the length of the tibia (Figure 6), with nine values appearing above the regression line. All the measurements fell within two times the standard deviation from the mean.

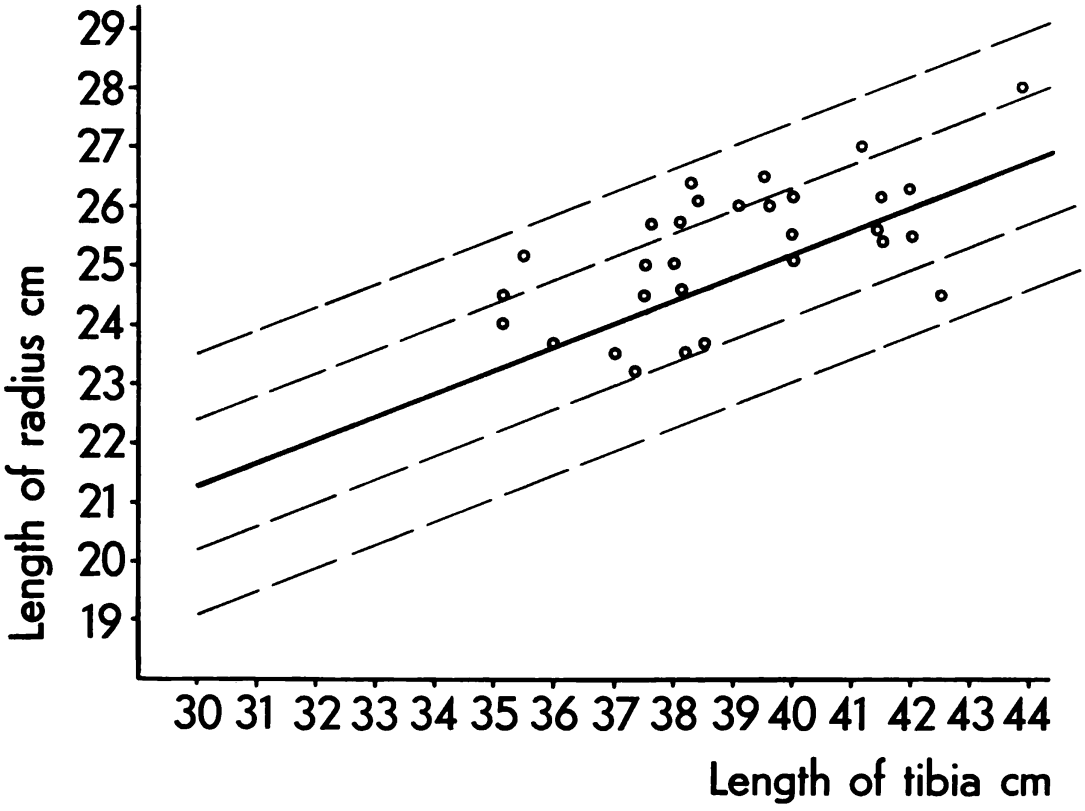

FIGURE 1

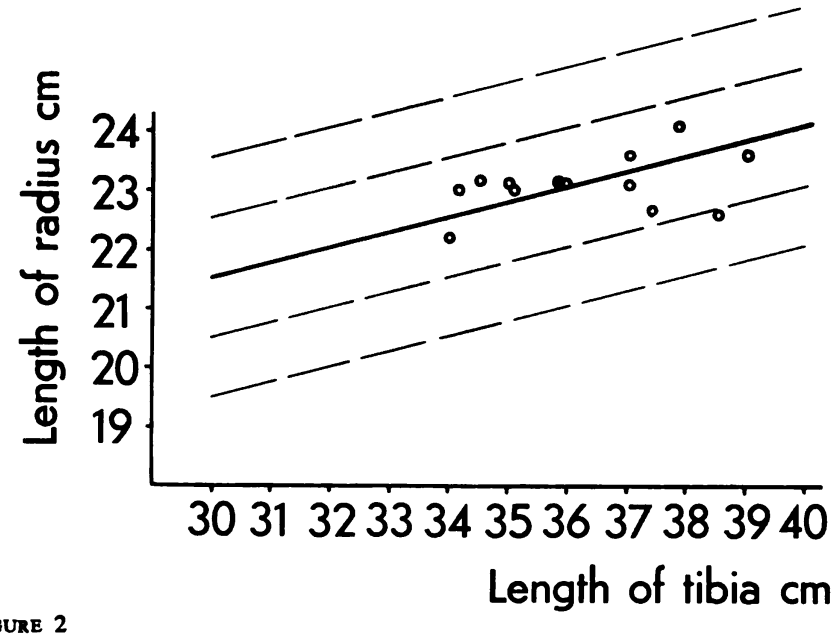

FIGURE 2

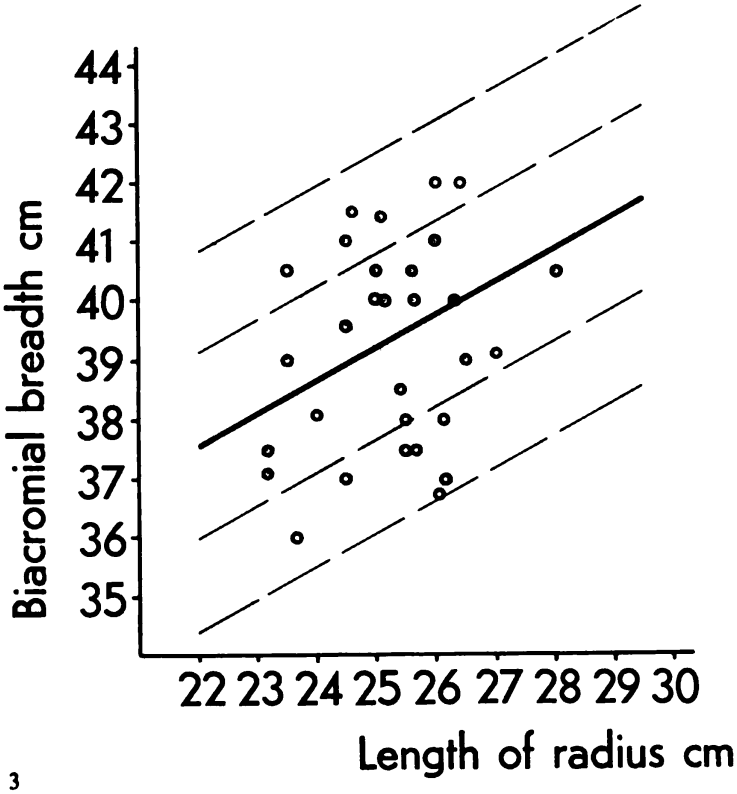

FIGURE 3

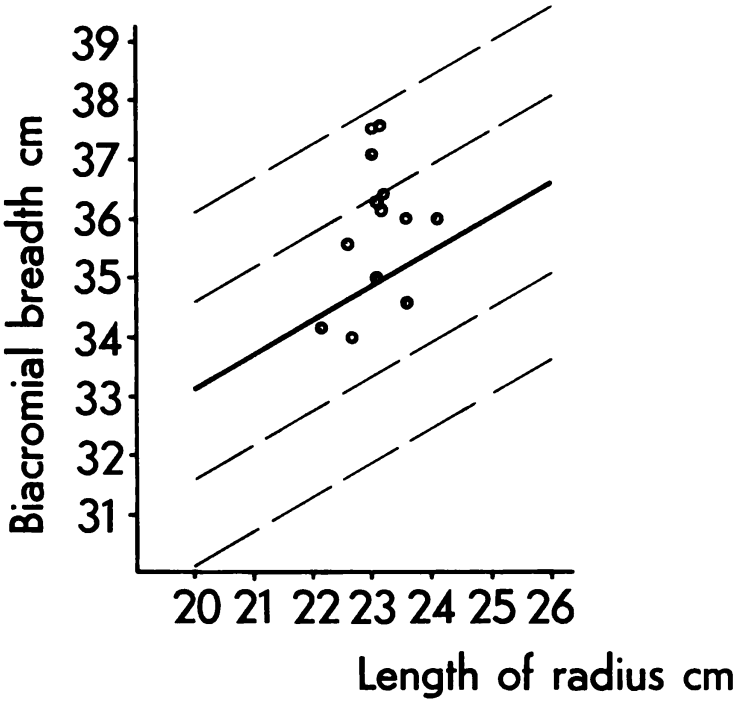

FIGURE 4

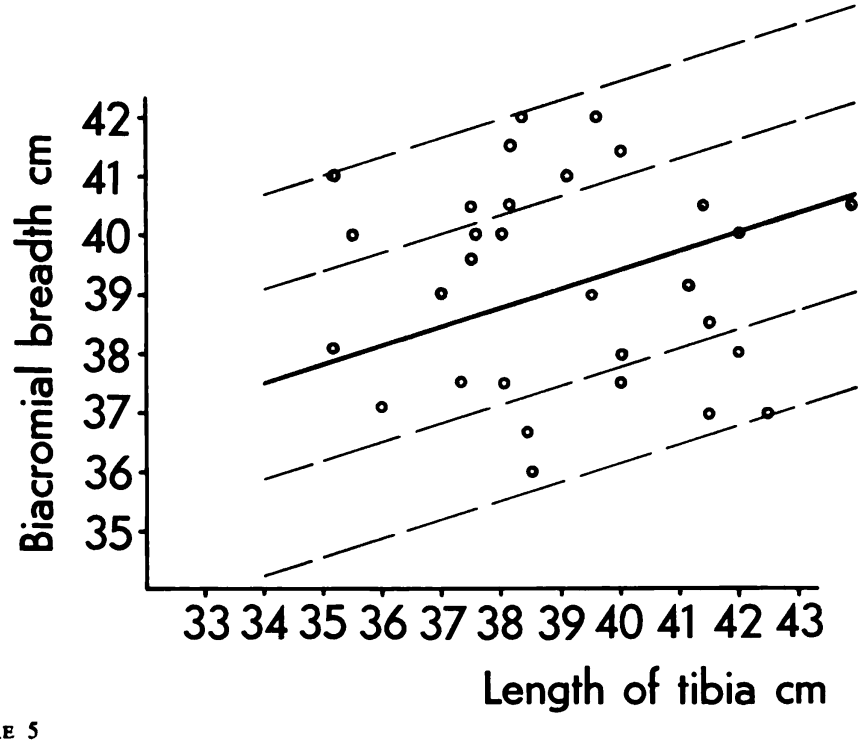

FIGURE 5

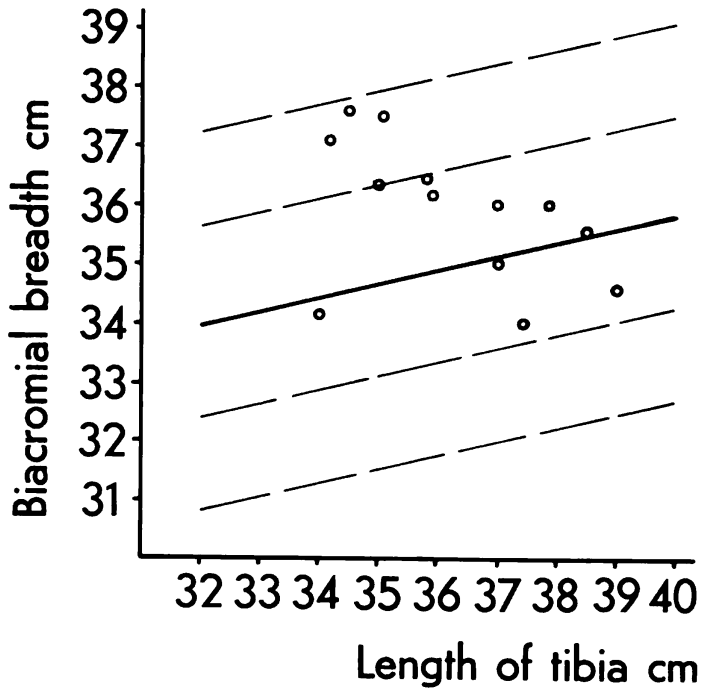

FIGURE 6

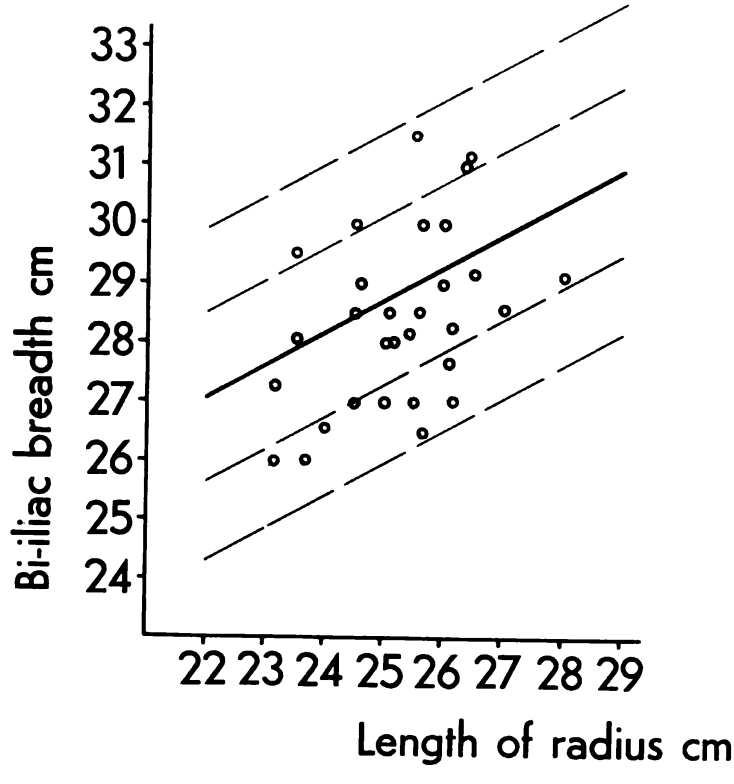

FIGURE 7

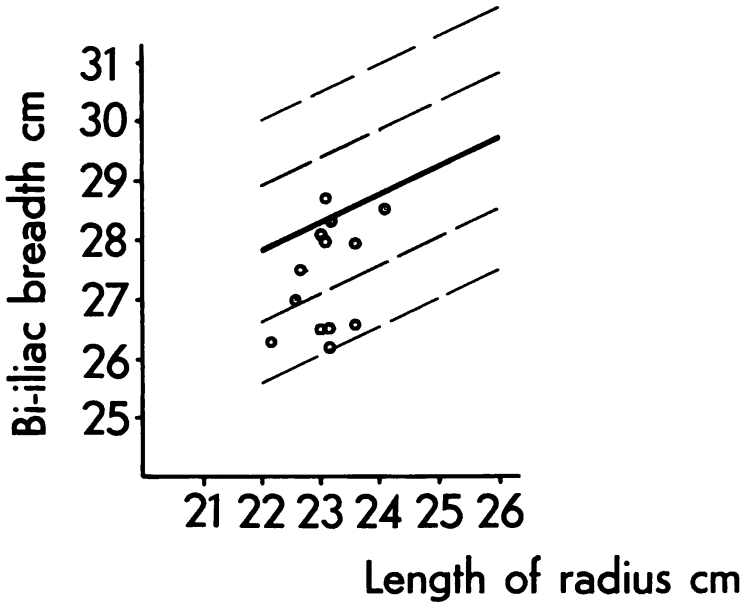

FIGURE 8

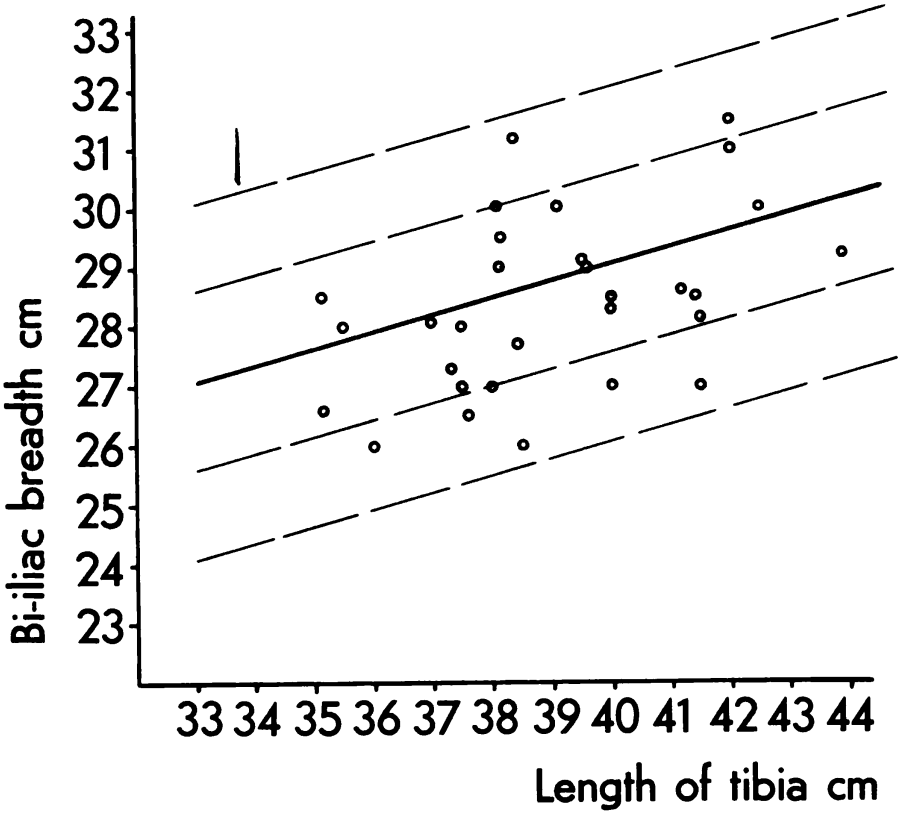

FIGURE 9

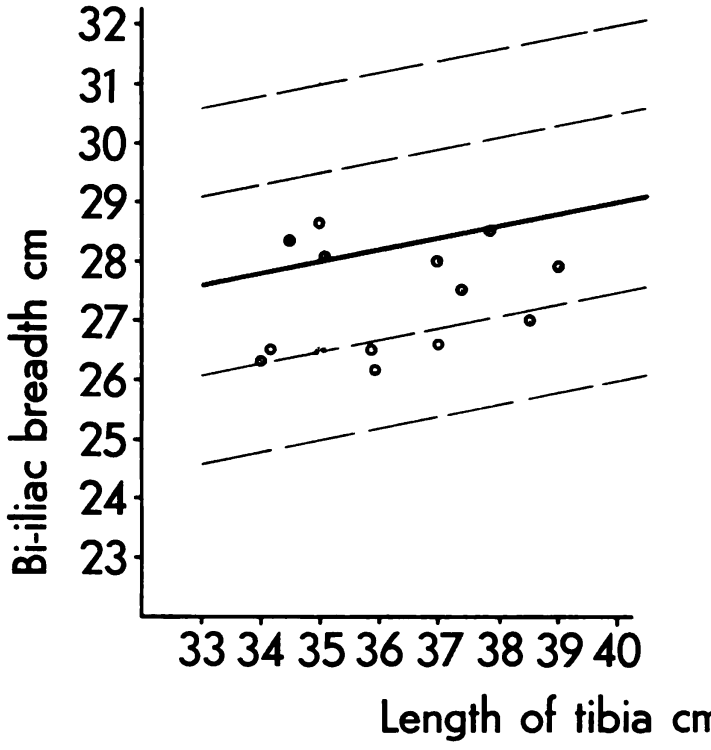

FIGURE 10

Discussion and Summary: Physical Characteristics

In the opinion of some, the physical abnormalities seen in transvestism and transsexualism point to a constitutional origin, for example, the scanty beard, high-pitched voice, testicular hypoplasia and feminine body build in the males and the virilism and poorly developed breasts in the female. Benjamin (1966) reported that forty percent of transsexual men were underdeveloped sexually (sexual drive included), and many had the female type of pelvis and hair. Vague (1956) and Decourt and Guinet (1962) drew attention to the feminine build of some male transsexuals.

It is hard to evaluate the significance of the observations reported by different authors. The results must be treated with caution because different cases were judged from widely divergent points of view. Some authors (Randell, 1959; Hoenig and Torr, 1964; Ball, 1966), who examined large series and who probably judged consistently from case to case, did not observe any gross anomalies. The series of transsexuals reported here did not differ from the general population in external features, except for one case in which there was reason to suspect an endocrine disorder. Some of the patients showed an abnormal distribution of pubic hair, but so do subjects in the general population (Dupertius, Atkinson and Elftman, 1945). One of the male patients had no beard and four had only a sparse one, but these men, who had passed

through puberty at a normal age, were mostly still too young at the time they were examined to be clearly documented as abnormal in this respect. There was one case of adolescent gynecomastia which was not too unusual in view of the patient's age.

Neither the men nor the women differed to any noteworthy extent from the normal in any of the body dimensions measured. However, the women often showed a larger than average biacromial breadth in proportion to the length of the radius and tibia, which to some degree bears out the observation that some female transsexuals have the wide shoulders of the young man. But it must be remembered that there were only thirteen women in the series, and their ages were not quite representative of the general population.

At present, there is no convincing evidence pointing to any gross abnormalities in the physical characteristics or body measurements in a group of transsexuals. However, there is a need for further examination of larger groups, particularly regarding the body measurements.

Parental Age and Birth Order in a Series of Thirty-Nine Transsexuals

There are several disorders that are more common among children born to relatively old parents than to a younger group. Nongenetic factors may affect the distribution of the affected subjects by birth order. In some instances, a genetic factor may do the same, as in the chromosomal nondisjunction that produces mongolism more often in the pregnancies of older than younger women.

Information regarding paternal age, maternal age, and birth order was obtained respectively from thirty-nine of forty-three male and female transsexuals, twenty-seven males and twelve females. It was unobtainable for four patients born outside Sweden, and the paternal age was not known in one of the other cases. The parental ages were compared with the ages of all Swedish mothers and fathers of children born in the same years as the patients.

The figures for maternal and paternal ages are shown in Tables

Table 1
Maternal Age at Birth of Thirty-Nine Transsexual Subjects
(Both Sexes Combined)

Maternal Age	Transsexuals	Controls[1]
–20	3	2.1
20–25	9	9.2
25–30	12	11.1
30–35	7	8.8
35–40	7	5.5
40–45	1	2.1
45–	—	0.2

[1] According to official Swedish statistics (see text).

Table 2
Paternal Age at Birth of Thirty-Eight Transsexual Subjects
(Both Sexes Combined)

Paternal Age	Transsexuals	Controls[1]
-25	6	3.3
25-30	8	9.4
30-35	10	10.4
35-40	7	7.7
40-45	5	4.4
45-	2	2.8

[1] According to official Swedish statistics (see text).

1 and 2. The mean maternal age was 28.8 years in the present series against 29.3 years in the control series. The difference is not significant.

The mean paternal age was 33.0 in the present series, against 33.8 years in the control group. This difference is also not significant.

Table 3 shows the figures for birth rank. As seen from this table, the thirty-nine patients were randomly distributed by birth rank. The difference between the observed and expected figures is not significant.

Thirteen patients were first-born and thirteen last-born. These figures do not differ significantly from the number which could be expected—10.4. Thus neither the maternal age nor the paternal age differed significantly from that in an average Swedish population, nor did the patients differ significantly from the expected birth order. The findings are in accordance with Slater's (1962) figures for maternal age and birth order in thirty-six cases of transvestism.

Transsexuals do not differ from the general population in the age of their parents at birth, nor in their ordinal-position within the family.

Table 3
Birth Order of Thirty-Nine Transsexual Subjects

Size of Sibship	Number of Affected Patients by Rank												Expected number each rank
	1	2	3	4	5	6	7	8	9	10	11	12	
1	(5)												–
2	6	5											5.50
3	4	2	–										2.00
4	1	–	–	3									1.00
5	1	–	–	–	3								0.80
6	–	–	–	2	–	–							0.33
7	–	–	1	–	–	–	–						0.14
8	–	–	–	–	–	–	–	1					0.13
9	–	–	–	–	–	1	1	–	–				0.22
10	1	–	–	–	–	–	–	–	–	1			0.20
11	–	–	–	–	1	–	–	–	–	–	–		0.09
12	–	–	–	–	–	–	–	–	–	–	–	–	–
Observed total	13	7	1	5	4	1	1	1	–	1	–	–	34.0[1]
Expected total	10.41	10.41	4.91	2.91	1.91	1.11	0.78	0.64	0.51	0.29	0.09	–	34.0

[1] Total equals 34 with siblings plus 5 only children.

PART IV

TREATMENT ASPECTS OF TRANSSEXUALISM

CHAPTER 15

ATTITUDES TOWARD TRANSSEXUALISM AND SEX-REASSIGNMENT PROCEDURES

Richard Green, M.D.

In July, 1967, the author received through the mail a manila envelope, mailed by a physician in another state, containing a green dress and a packet of evangelical literature. It was one of the return envelopes that had been sent out three years earlier from the Gender Identity Research and Treatment Clinic at UCLA, together with research questionnaires designed to assess physicians' attitudes toward transsexualism and sex reassignment. What delayed the envelope's return is a mystery, but its contents illustrate the extraordinary degree of emotionalism encountered in response to the transsexual phenomenon. The emotionalism generated by discussion of transsexualism had become evident when the filled-out questionnaires received in the course of this study were analyzed.

Methodology

The questionnaire, written in collaboration with Dr. Robert J. Stoller and Dr. Craig MacAndrew, gave a brief and typical clinical history of a transsexual, followed by a series of questions the answers to which were expected to reflect the respondent's attitudes toward the patient, his symptoms, and his request for sex reassignment (Green, Stoller, and MacAndrew, 1966). The questionnaire was further designed to obtain an impression of the reasons physicians might have for objecting to sex-reassignment procedures, as well as how they would subsequently view the patient should sex-reassignment procedures be implemented by some other physician. The medical group polled was comprised of psychiatrists, general practitioners, urologists, and gynecologists. Psychiatrists were picked in random fashion by taking a name at prescribed intervals from a national medical directory and from the listing of the Southern California Psychiatric Society. The remaining medical groups

were randomly picked from nationwide medical listings. Six hundred questionnaires were mailed to psychiatrists of which 196 were returned; 300 were mailed to urologists with 56 returned; 200 were mailed to gynecologists with 44 returned; 250 were mailed to general practitioners with 103 returned. The shortcomings inherent in questionnaire studies are well known as are the difficulties in judging how representative of an entire mailing list are those who complete and return a questionnaire. Imperfect as they are, the data do allow for inspection of some attitudes held by a large number of physicians.

The case history in the questionnaire read as follows:

> Since early childhood, this 30-year-old biological male has been very effeminate in his mannerisms, interests, and daydreams. His sexual desires have always been directed toward other males. He would like to be able to dress exclusively in women's clothes. This person feels inwardly and insists to the world that he is a female trapped in a male body. He is convinced he can only be happy if he is operated on to make his body look like that of a woman. Specifically, he requests the removal of both testes, his penis, and the creation of an artificial vagina (all of which can, in fact, be done surgically). He also requests that his breasts be made to appear like a woman's, either surgically or by the use of hormones (this, too, is medically possible).

RESULTS

Four-fifths of the respondents considered a person making such a request "severely neurotic." By contrast, only seventeen percent of the psychiatrists considered the person "psychotic," as did fifteen percent of the general practitioners and fourteen percent of the urologists and gynecologists. As to whether such a person represented a "threat to society" six percent of psychiatrists considered this to be true as did nineteen percent of the urologists and gynecologists and eleven percent of the general practitioners.

Given only the information in the brief case history, very few of the physicians approved the patient's request: nine percent of the psychiatrists, six percent of the general practitioners, and three percent of the urologists and gynecologists. A stipulation was then given in the questionnaire that a psychiatrist had examined the patient and found him neither psychotic nor severely mentally ill. The percent of urologists and gynecologists who would approve the surgery rose from three to eight. The percent of psychiatrists approving the requests rose from nine to twenty-one, and the percent of general practitioners rose from six to nineteen. The further stipulation was offered that the patient had undergone two years of psychotherapy, still wanted sex reassignment, and was judged by the treating psychiatrist to be reasonable in all other respects. This stipulation more than doubled the percent of urologists and gynecologists approving (eight to nineteen) and increased the percent of psychiatrists endorsing the procedures from twenty-one to thirty,

while the number of approving general practitioners rose from nineteen to thirty-four percent.

When the stipulation was offered that after two years of therapy the treating psychiatrist also endorsed surgery, the percent of surgeons who would approve the request doubled from nineteen to thirty-seven. Two in three would not consider the psychiatrist's endorsement adequate grounds for initiating sex reassignment. The percent of psychiatrists now approving reassignment rose from thirty to forty-five, and for general practitioners from thirty-four to forty-one.

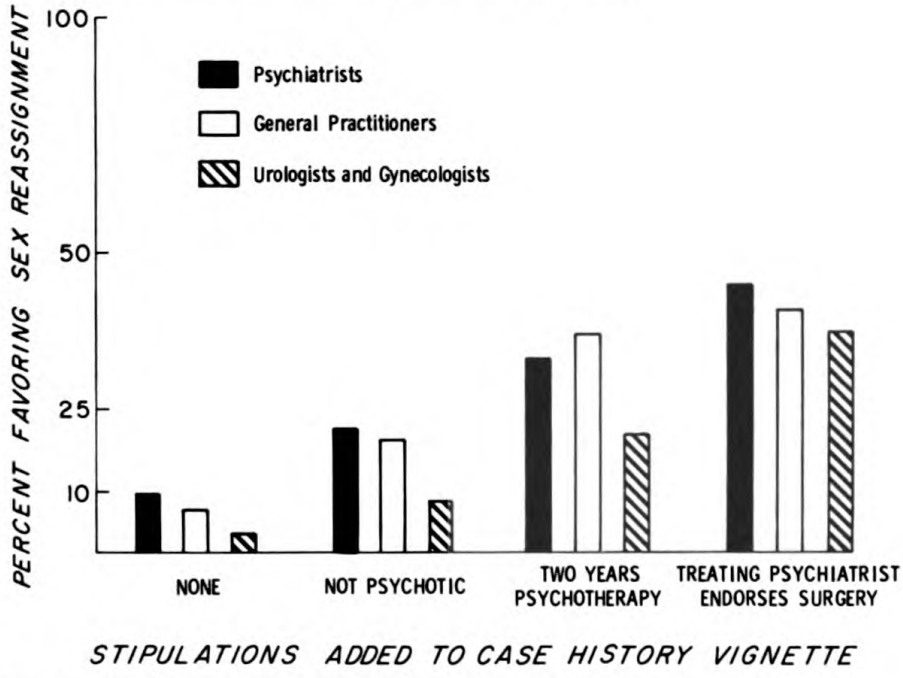

FIGURE 1. Physicians' responses favorable to sex reassignment.

The next stipulation, namely the presence of a concomitant pseudohermaphroditic anomaly significantly influenced the physicians. They would be more willing to endorse surgery if the patient had either Klinefelter's syndrome or penile agenesis. This is consistent with the "double standard" for sex-reassignment surgery for transsexuals versus hermaphrodites which exists at some medical centers. At one university, for example, while no anatomically normal transsexual has been granted sex-reassignment surgery, a patient with Klinefelter's syndrome has had his penis and testes removed, and an artificial vagina constructed. The patient was behaviorally indistinguishable from a transsexual, but was discovered to have a histologic defect in testicular tissue and an alteration in chromosome number (Moore, 1966). As long as there was a traditionally acceptable biologic basis for establishing the "intersex" status, the procedures were considered justified, though proof is lacking that the presence of such a biologic status has anything to do with etiology and is not merely coincidental to the transsexualism.

The three groups of physicians did not differ greatly from each other in their reasons for refusing surgical or hormonal treatment. For example, among the 168 responding psychiatrists, eighty-six percent would not want to have to explain their actions to the local medical society; sixty-four percent were concerned over the legal implications and the possibility of a malpractice suit; and ninety-four percent objected on *moral and/or religious grounds.* This last figure was unexpected from a group frequently considered to be by reason of their professional goals, morally nonjudgmental. Eighty-three percent felt that as an elective procedure the operative morbidity involved would be sufficient to be a contraindication.[1]

Despairing transsexuals may be driven to suicide. In one series of forty-three male transsexuals, twenty percent claimed at one time to have attempted suicide (Wålinder, 1967). The author has interviewed several who were suicidal when first seen. While no physician should be blackmailed by a patient's threat of suicide into performing a medical procedure to which he objects for a valid reason, this degree of despair in a patient might well be a consideration in patient management. Thus, the questionnaire asked the respondent to assume that a transsexual who had undergone two years of psychotherapy, and whose treating psychiatrist was convinced that sex reassignment was indicated, would *almost certainly* commit suicide should sex reassignment be denied. The majority of physicians felt that this factor of suicide should *not* influence their decision opposing sex reassignment.[2]

In contrast to the conservatism with which granting sex-reassignment procedures was viewed, there was a paradoxical liberalism in the approach to transsexuals should they already have been successful in obtaining their surgery. Seventy-five percent of the responding physi-

[1] A parallel argument has been raised against cosmetic rhinoplasty. A decade ago, considerable concern was expressed over the psychologic effects of this "elective" cosmetic surgery. A careful study of the pre- and postoperative status of such patients revealed that rendering the appearance of the patient's nose more acceptable to himself improved psychologic functioning (Edgerton, Jacobson, and Meyer, 1960). This study was conducted at The Johns Hopkins Hospital, the same hospital which later initiated sex-reassignment surgery.

[2] Attitudes toward the transsexual held by nonmedical persons with a sexual behavior anomaly were also studied. Male and female homosexuals and male transvestites were polled. Homosexuals were obtained from the membership lists of two national homophile organizations (200 male and 198 female respondents) and transvestites from the mailing list of a nationally circulated transvestite magazine (105 respondents). These respondents with a sexual anomaly of their own were more sympathetic to the transsexual's plight than were the medical respondents. The transvestites were more sympathetic than the two homosexual groups, perhaps because there is more overlap between the phenomena of transsexualism and transvestism (though they are by no means identical). As to whether the transsexual should be considered "insane" or "a threat to society," these three lay groups were closer in their position to psychiatrists than the other medical groups. The three lay groups were, however, nearly as ready to label the transsexual "severely neurotic (emotionally disturbed)" as were the physician groups.

cians considered that the postoperative patient should be permitted to change legal papers such as birth certificate and driver's license, and eighty percent felt legal marriage in the new gender was permissible. Even on the issue for which there are as yet no data on which to base a judgement, and in which a young life may be jeopardized, there was striking liberalism: fifty percent would permit the postoperative patient to adopt a child in the parental role of their new gender.

Thus it would appear that views held on sex-reassigned patients may be less harsh than might be expected from the reluctance to initiate reassignment. Perhaps when such responsibility is assumed by another, it is easier to respond empathically to the plight of the transsexual.

Clearly, no physician should perform an act which he views as harmful to his patient. Was this the consideration which dissuaded respondents from endorsing sex reassignment? Only one in four was of the opinion that the procedures would definitely be harmful. One half felt the procedure was as likely to help as not, and one in four thought the procedures would definitely be helpful.

According to the actual evidence currently available, there is a strong suggestion that a majority of postoperative patients are better adjusted after surgery than they were before. In a survey of the world literature, reported to the World Congress of Psychiatry in 1966, Pauly found that "a satisfactory outcome to the sex-reassignment surgery, in terms of improved social and emotional adjustment, is nine times more likely than an unsatisfactory one" (Pauly, 1968).[3]

Our research questionnaire itself became a subject of controversy. The local psychiatric society received letters protesting the questionnaire as did the UCLA Department of Psychiatry. One psychiatrist in an East Coast city expressed concern about being a recipient of the questionnaire and demanded to know how his name had been selected. Other questionnaires, received by lay persons, were returned unanswered with scurrilous messages inscribed on the cover sheet, for example: "Dr. Green: If you have to select one answer, would you prefer to spit on: A. The American Flag; B. The Bible; C. Your Mother. If you don't get the message—Forget it!"

Discussion

Many physicians who responded to these research questionnaires based their objections to endorsing reassignment procedures on fear of medical censure, malpractice suits, or on religious grounds. Today it is a matter of history that physicians in at least five states have openly performed sex-reassignment surgery and, to date, none have been the object of medical-society censure or prosecution. Furthermore, a letter

[3] See Chapter 26 by Randell for the most comprehensive psychiatric study to date of the pre- and postoperative status of male and female transsexuals. These data indicate that reassignment procedures are beneficial to most patients.

received by the author from the legal counsel of the Los Angeles County Medical Association indicated, "I do not see how such a transsexual's request and the indicated necessary medical procedure properly conducted, at an accredited hospital, could subject the physician to any type of disciplinary action" (Field, 1968).

Controversy remains over possible prosecution for mayhem. To date no one has been prosecuted. Whether, if prosecuted and convicted, the conviction would be upheld, has not been tested.

Shortly after the *New York Times* broke the story that Baltimore's Johns Hopkins Hospital had instituted a program of surgical sex reassignment (Buckley, 1966), the Baltimore *Sun* polled thirteen local clergymen of several faiths on their views of the moral aspects of the procedures (Wallace, 1966). With the exception of an official of The Catholic Archdiocese who declined to comment, there was a striking acceptance of the Hopkins procedures. A pastor of a Lutheran Church commented: "Obviously this (transsexualism) is a mistake of nature and this (surgery) should be allowed." A Baptist minister: "If these people can be helped, Hopkins is proceeding in the right direction . . . I'm all for it. I see no moral objection to it." An Episcopal priest: "If this helps a person to improve his image of himself and his ability to live a more productive life, okay." A rabbi: "I see this as purely a medical matter . . . I cannot see any moral objections." And another rabbi: "If it is possible through surgical methods to help a person to a better adjustment to life, it's religiously approvable." A Presbyterian minister: "I see no moral impediment (to the procedure used) to relieve tensions in these people and in giving them the greater likelihood of being useful members of society." The Dean of the Episcopal Cathedral was quoted: "The responsible use of surgical operations (in such cases that cannot be corrected by psychotherapy) would be in accord with Christian teaching."

That the religious position on sex reassignment is not as unanimously accepting or uncomplicated as the above is indicated by a letter the author received from a Talmudic scholar who considered the issue from the standpoint of traditional Jewish writing:

> A normal male is under religious mandate to beget children . . . therefore the operation would be prohibited. A female, however, is not mandated to produce children . . . However she too would be prohibited on another ground which applies equally to both women and men. Both men and women are under the strict commandment against unnecessarily endangering their lives . . . Now there can be no doubt that the surgical procedures described involve serious dangers to health and life . . . Of course, if a group of reputable doctors would declare that the patient is in grave psychological state and that only the transsexual operation could restore him to mental health, then in such an extreme case the question might be reconsidered (Freehof, 1968).

Another rabbi similarly observed: "Virtually every religious prohibition may be waived where it is a matter of life and death . . . What shall we say with regard to the transsexual? Is there ever a life and death matter?" (Fishman, 1968).

Finally, a most critical statement by a spokesman representing a religious view on the sex-reassignment program at Johns Hopkins is that of a Catholic priest in a book entitled, *Medical Ethics*:

> Whatever may be the causes of transsexualism, whatever may be the measure of our success or failure in treating this psychological abnormality, *there can be no doubt of the immorality of the surgical procedures* . . . anyone who possesses a knowledge of the Principle of Totality and the duties which this Principle imposes upon man to preserve bodily integrity must severely condemn . . . surgery for transsexualism . . . Morally acceptable remedies must be directed toward the production of a sound mind in the person not toward the mutilation of his body (McFadden, 1967).

There may be some cause for optimism that the sensational and controversial approach to transsexualism may be on the wane. Clearly, the impact which the Christine Jorgensen revelation had on the world fifteen years ago was not equalled when The Johns Hopkins Hospital acknowledged that they had instituted a program of sex reassignment. When Hopkins announced their program, *Time* magazine, with a large international circulation, featured the story in its December 2, 1966, medical section. *Time's* correspondence from its readers in response to the story was less than overwhelming; a total of fourteen letters were received. Half expressed approval of the Hopkins program and half opposed it (*Time*, 1968c). In 1967, the *American Journal of Psychiatry* published a harshly critical letter from a well-known psychiatrist condemning the surgical sex-reassignment program at The Johns Hopkins Hospital (Meerloo, 1967). The Journal was hardly inundated with comments: two letters were received (*American Journal of Psychiatry*, 1968). Both were published, and both supported the Hopkins program (Hastings, 1967; Green, 1968).

Summary

A questionnaire designed to assess the attitudes of medical groups toward the transsexual and his request for surgery was completed by four hundred physicians. Eight percent of the respondents considered the transsexual "severely neurotic" and fifteen percent considered the person "psychotic." The majority of responding physicians were opposed to the transsexual's request for sex reassignment even when the patient was judged nonpsychotic by a psychiatrist, had undergone two years of psychotherapy, had convinced the treating psychiatrist of the indication for surgery, and would probably commit suicide if denied sex reassignment. Physicians were opposed to the procedures because of legal, professional, and moral and/or religious reasons. In contrast to the

conservatism with which granting of sex-reassignment procedures was viewed, there was a paradoxical liberalism in the approach to these patients should they already have been successful in obtaining their surgery elsewhere. Among the respondents, three-quarters were willing to allow the postoperative patient to change legal papers such as a birth certificate and to marry in the new gender, and one half would allow the person to adopt a child as a parent in the new gender.

CHAPTER 16

INAUGURATION OF A RESEARCH PROJECT ON TRANSSEXUALISM IN A UNIVERSITY MEDICAL CENTER

Donald W. Hastings, M.D.

History

In December, 1964, a thirty-eight year old white male showing the classical syndrome of transsexualism was admitted to the psychiatric section of the University of Minnesota Hospitals. The psychiatric staff was so impressed by the man's suffering and the intensity of his desire to obtain surgical sex reassignment, that they began the long process which resulted ultimately in the hospital's first change-of-sex operation two years later. While we, the attending psychiatrists, were acquainted with the syndrome from descriptions of the Christine Jorgensen case and other recent articles, particularly those by Benjamin, this man was the first transsexual that I recall seeing in over thirty years of psychiatric experience. Perhaps some of the transvestites who came to me for consultation in years gone by were transsexual, but I doubt it. I do not recall a previous patient who literally begged for conversion surgery and who displayed his anguish by saying that his life would not be worthwhile without it.

A review of the literature made us aware that there were important legal problems involved (Bergen, 1962). A senior faculty member of the University of Minnesota Law School indicated that he could not recommend a surgeon to perform a change-of-sex operation in a state that had a mayhem statute on its books. By curious coincidence, Minnesota had no such statute on the books any more, because the Minnesota State Legislature that recodified the criminal code in 1963 had remained silent about the previously existing mayhem statute. To ascertain this, we held a conference to which we invited a number of officials including a prosecuting attorney. This conference confirmed to us that the mayhem statute was indeed non-existent in Minnesota.

Our legal advisor then pointed out that the major problem to remain was the competence of the person signing a valid operative permit. It was recognized that there would be other legal problems after surgery (change of name, request for change of birth certificate), but the way seemed to be open for such surgery in Minnesota without the surgeon bearing a greater risk than in performance of other types of surgery for which a valid consent had been obtained. The legal advisor also recommended that each patient be represented by an attorney of his own choosing, who would examine the operative permission form with the patient, help postoperatively with the change of name, and so on. This has been routine since the inauguration of the project.

The absence of the mayhem statute was regarded as pivotal by the attorneys who studied the matter. They felt that, in a state which had such a statute on its books, it might be inadvisable for a surgeon to do a "sex-changing" procedure because of the criminal liability he could incur. Mayhem is usually a felony, and an operative permission form has no bearing on it because one cannot give permission to commit a crime.

The steps that followed were taken within the University structure. Dr. John Blum of the Department of Surgery had become interested in the project a year before the first operation was scheduled and helped in planning it, as the first surgeon of the research project.

A letter of information about the proposed program was sent to the Dean of the Medical School, with a copy to the President of the University, and their comments were invited. The Dean had, in fact, been knowledgeable about the project, had examined the first patient, and supported the venture from the start. The President raised no objections and decided that the matter was a medical and professional one. He informed the Board of Regents of the program and they took the same attitude as the President. Unknown to the investigators was the deep concern felt by the President and the Regents that when the project ultimately was announced to the public, there would be serious criticism and that the image of the University would suffer thereby. However, they tactfully did not communicate their fears. What happened in this regard will be mentioned subsequently.

Several committees were consulted formally. The Medical School-Hospital Committee, composed of senior faculty from the clinical departments and representatives of the hospital administration, approved the project, if it were to be an investigative program. Since a bona fide research program was being planned, the consent of this important committee was secured.

The matter was also submitted to the Medical School committee which passes on all research projects having to do with human experimentation. The faculty member of the Law School who had served as legal advisor from the outset was also a member of this committee, and

hence it was not necessary to repeat the many legal inquiries that had already been done. This committee, after deliberation, approved the project. They examined the operative form that was proposed, raised pertinent questions about competence, informed consent, and the like.

By October, 1966, a Gender Committee was formed of two surgeons, an obstetrician-gynecologist, a psychologist, a senior nurse, a hospital administrator, and a psychiatrist. Two members travelled to New York City to examine three male transsexuals who had been operated some years before abroad. Both of them were impressed with the excellence of the surgery and with the good social adjustments reported by the patients.[1] A short time later, Dr. Blum observed transsexual surgery at The Johns Hopkins Hospital, through the courtesy of Dr. Howard W. Jones, Jr.

Publicity and its Results

We had decided to make no public announcement until the project was well under way and we had data to report, first in the medical literature and then in the public press. In retrospect, this was a naive idea. The interest of the press in the project was so high, once it had been found out, that if we were doing it again, we would consider asking a senior editor of a local paper to serve us as an advisor from the outset. We had misjudged what a goldfish bowl a University Hospital was and how many possible informants there were. Almost literally within minutes of scheduling the first patient in the operating room (under a false name and operative procedure), a reporter was on the telephone asking for full information. The editor told the author (we were old friends) that the paper would go ahead with the story whether the hospital cooperated or not. He would value our cooperation and would give theirs in return for factual data. The story of our project, accurate or inaccurate, was going to appear. The paper did, in fact, have a good deal of information. The Johns Hopkins Hospital had announced their project two months before, and accurate information about transsexualism, the patients, and the operative procedure had appeared in the national press.[2] The *New York Times* in particular had carried a well researched article on the subject. Our local papers had these data. Faced with this decision, we decided to cooperate, which proved to be a wise move. The senior editor and his reporters wrote a factual and sympathetic article and we are indebted to them for their professional help. However, at the time this "emergency" arose, those of us connected with the project feared that the publicity would bring a storm of public criticism and that the University administration would ask us to stop the project before it began.

The press release appeared in the Minneapolis Sunday paper on

[1] Arrangements for this visit were made possible by the kind cooperation of Drs. Harry Benjamin, Wardell Pomeroy, and Leo Wollman of New York.

[2] Compare Chapter 17 by Money and Schwartz.

December 18, 1966, a few days after the first patient was operated. Since my name was the only one mentioned in the press release, I read the paper that Sunday morning with personal interest and waited for the telephone to ring with calls from cranks, persons opposed to surgery on religious grounds, and the like. There were no calls of this type. That evening on the television newscast there was a description of the project, which also mentioned my name. Again I waited for calls. There were none, and I went to bed that night immensely relieved but wondering whether anyone read the papers or watched television. As the following days and weeks went by, there were no calls or letters criticizing the project; the only exception was one from a lay preacher who condemned the project on moral grounds: "What God has joined together let no man put asunder," etc. On the contrary, a number of letters supporting the project arrived, including several from clergymen asking how to refer one of their parishioners for study and possible inclusion in the project.

There also began to arrive hundreds of letters from people, in all sections of the United States and from over the world, including Asia and from behind the European "iron curtain," inquiring if we might accept them for surgery. The vast majority of the letters were earnest, intelligent, and sincere. A few were from persons who seemed psychotic (one man reported that he was menstruating per rectum every twenty-eight days, for example). Many sounded tragic and desperate, and posed a real problem: What does one do with a letter from two thousand miles away that asks for surgery and states that suicide will be the result if a favorable answer is not forthcoming?

The majority of the letters and telephone requests were from men desiring surgery so that they could live their lives as women. There were a dozen or more letters from women asking if we were operating on female transsexuals (we do not). The youngest correspondent stated that he was twelve years of age, the oldest one said he was a man of seventy-three who wished to live out, as a woman, the few years that remained for him to live.

General Observations

If one starts a project on transsexualism, it is well to be prepared for the flood of letters that will arrive after the press release. Being a state-supported medical school and hospital, we could accept medically indigent transsexual patients from Minnesota under the same conditions as those with any other type of medical or surgical condition. However, by hospital policy, a non-resident must pay full private rates so as not to be an expense to the Minnesota taxpayer. Since the evaluation process and the ultimate operation are expensive procedures (about $5000 at private rates), and since most of the transsexual patients from out–of–state cannot afford these costs, it was decided that only residents

of Minnesota could qualify. We had to consider that perhaps most of the financially independent transsexual Americans have been operated abroad, and the pool that remains is composed of those who are medically indigent. It has been our experience that, in planning a transsexual surgical project, means must be on hand to carry the financial load for most of the patients. In a state-supported institution such as ours, this does not pose a problem as long as we confine ourselves to citizens of the state.

In talking to transsexual men about their problems and life situations, one is frequently impressed with the unrealistic expectations they have of surgery. A man of twenty-four, of normal intelligence and a high school graduate, but who has never held a job for more than a few days at a time, who has no marketable skills, who has no friends outside of fellow transsexuals, may state with all sincerity that as soon as he is operated and can live as a female, life's problems will be at an end. He will work for a while perhaps but will soon marry and adopt babies to raise and to mother. As a woman, she will love her husband dearly and will devote her life to him. Rarely does such a patient initiate a realistic discussion about the obvious problems that follow surgery: legal, social, economic, and emotional. The fact that there is pain connected with the surgery takes some patients rather by surprise. However, almost all, before surgery, will inquire as to what they may expect from a sexual aspect, whether the artificial vagina will become sexually responsive, and so on. There is also usually concern about breast size. The patient may be scarcely out of anaesthesia for the genital operation when asking about how soon plastic surgery can be done on the breasts. The patient who has other minor defects, such as a nose that may be crooked, a larynx that may be prominent, or ears that he regards as unusually large, often is preoccupied with thoughts of surgical correction for these. The global view of things, however, usually is missed. Items such as social adjustment, work adjustment, and the views, attitudes, and feelings of others are rarely raised as questions, and when others raise them, it is typical that most patients do not treat them with realism. There are clear exceptions and a few patients have been entirely realistic as they have attempted to assess their positions in the scheme of things, both pre- and postoperatively.

In the hospital setting, the confusion of identity which has plagued the patient all of his life becomes immediately apparent to nurses, aides, other patients, and physicians alike. How does one address the patient—as Miss or Mister? With the girl's name he likes to be called or with the male name that is on the hospital record? Should these men dress as women on the ward during the preoperative study period, or should they be required to dress as men until operated? When the patient asks whether he should use the men's or women's toilet, what do you tell him? Other mundane problems of ward management arise that require much ingenuity from hospital staff at all levels.

Before starting a transsexual project, it would be prudent to have discussion about how to deal with everyday problems of gender role in the context of the particular hospital. For example, should the patient dress as a male or female in the hospital? What he does obviously will determine some other issues such as which toilet room he enters. This being the case, it seemed to us reasonable to ask patients to dress as men until surgery is performed. We do ask the patient to bring his female clothing to the hospital so that preoperative photographs may be taken for record purposes. He also is asked to cross-dress when he meets with the Gender Committee so that an idea can be formed as to how he will look as a woman.

Research Project

When one talks to the transsexual patient, one quickly learns that the transsexual is convinced his salvation lies in a surgical procedure which will reassign his sex insofar as this is technically possible. This, the patient feels, will permit him to live as a "complete" female. Our research project is designed to put this concept to the test. In brief, we plan to operate a minimum of twenty transsexual males and determine their emotional, social, sexual, and economic adjustments made postoperatively, when the patients are to live as females. The period of follow-up is to be ten years, with evaluations being made every six months. It is not planned to utilize a psychotherapeutic relationship with the patient either pre- or postoperatively. Any such help will be supportive in a realistic sense, such as helping the patient obtain a first job postoperatively, nurses helping with female matters such as how to dress, wear make-up in an appropriate manner, how to conform to feminine manners and etiquette, such as sitting with knees together, and the like. Most of the patients need no such coaching, since they have cross-dressed in public for months or years and are feminine in appearance. The tendency to use lipstick of too bright a color or too much eye shadow is almost universal among transsexuals, so that the patient, dressed as a woman, often appears so conspicuous and seductive that it is a social disadvantage. However, invariably he makes a much better looking woman than a man. Dressed as a man, the patient is conspicuous because of his feminine appearance and mannerisms.

Selection Criteria

The policy of the University of Minnesota Hospitals requires that any patient be referred by his physician. He cannot refer himself. Unless able to afford full private rates, he must be a resident of Minnesota in order to qualify for admission as medically indigent. He must be a male over twenty-one years of age; the age requirement makes it possible for the patient to sign his own operative permission form. We have no current plans to operate on female transsexuals. While we attempt to

involve parents if they are available, commonly the patient has divorced himself from his family or they will have nothing to do with this "queer" son. Impending surgery has served to bring several of these patients and their families back together again. The opportunity for parents to talk with a physician who understands the condition and is nonjudgmental is helpful. No patient known to be psychotic or mentally defective is accepted, even for initial interview, because he could not sign a valid operative permit. We did not knowingly accept anyone with a criminal record, unless it was clearly related to the basic problem, such as apprehension for cross-dressing in public. A married patient is not accepted because of the confusion that would be created by having two women in the household after surgery. A number of married men, some with children, applied for admission to the project but had to be told they were not acceptable. Usually they countered that they were planning to get a divorce, and they were then informed that they were free to inquire again at such time as the divorce became final. No commitments to accept them into the project, if they obtained a divorce, were made. It is, perhaps, doubtful, that a man who has been capable of courtship and a period of heterosexual relationship is, in fact, transsexual.

Upon medical referral and after correspondence to inquire about any dubious aspects such as date of birth, financial status, marital status, and the like, a five step program is instituted.

Initial Interview

This interview of about an hour is done by the author. Its purposes are: (1) to form tentative ideas about mental status and competence and to rule out a condition that is grossly disqualifying, such as overt psychosis, and (2) to explain the research project to the patient and to see if he still wishes to consider it when he knows what is involved.

Initial Hospital Study

The patient's name is then put on the waiting list for admission to the psychiatric unit of the University of Minnesota Hospitals. The psychiatric study period is seven to ten days in duration. An extensive personal history is taken and this is also obtained from parents if possible. Physical and neurological examinations and routine laboratory work are the same as with any hospital admission. Extensive psychiatric interviewing and psychometric testing are done. Special laboratory work includes chromosome count, buccal smears for sex chromatin, and endocrine studies. The patient is photographed dressed as a male, as a female, and in the nude. He is recorded on video-tape as he gives a brief history of his problem and the reasons he desires sex-reassignment surgery.

This study period in the hospital serves another important function,

in that it gives a longitudinal, twenty-four-hours-a-day picture of the patient, what kind of person he is, how he adjusts to patients and ward personnel, whether he shows psychotic symptoms that would be difficult to detect under other circumstances, and the like.

At the end of this period, the patient meets with the Gender Committee which considers the assembled data and interviews the patient. He usually appears before the committee dressed as a woman, so that an idea of female appearance can be formed. However, the Gender Committee addresses itself mainly to two criteria: (1) Is the diagnosis that of transsexualism? and (2) Is the patient mentally competent to sign a valid operative permit? If these questions are answered in the affirmative by the committee, the patient will be accepted into the research project. The committee is interested in other areas, but tries to divorce itself from considerations such as what kind of female the person may become, what chances there are for marriage, and similar questions that are essentially unanswerable. The committee may attach certain conditions to acceptance for ultimate surgery. One patient, for example, met all the criteria except that he was grossly overweight. The committee tentatively accepted him, but said it would like to see him after he had lost eighty pounds.

Acceptance by the committee carries the moral commitment to operate on the patient if he wishes so, and in this sense his long quest for surgery is at an end. The patient can now approach his ultimate decision about surgery more clearly. The cards are on the table.

Estrogen Phase

Upon discharge from the initial hospital study, the patient is referred back to his physician with the request that he be placed on estrogen therapy for six months. This has several effects. It appears to act as an endocrine "sedative" in that less tension is reported. It produces some breast enlargement and feminine contouring, suppresses erections, and reduces sexual drive, results welcomed by the patient.

During this six-month period the patient is required to obtain an attorney of his own choosing to represent him, counsel with him about the operative permit, to be sure he is adequately informed about the surgery, and to stand ready to petition for legal change of name and change of birth certificate.

Most importantly, this six-month period affords the patient an extended period during which he can consider and reconsider whether he wishes to go ahead with the surgery.

Surgical Phase

At the end of the estrogen phase, if the patient has maintained the decision to go ahead with surgery, he is readmitted for re-evaluation and surgical work-up. The surgery is done as a one-stage operation.

The postoperative convalescent period amounts to about three or four weeks of hospitalization, although the patient usually will begin to ambulate by the second or third postoperative day. She is trained to insert vaginal dilators and to take care of herself in other ways.

Follow-up Phase

After discharge from the hospital, a plan is made with the patient to make herself available for study on an outpatient basis at six month intervals for a ten year period. Such availability is the one commitment required of the patient in return for the surgery. From these follow-up data we will determine the postoperative emotional, social, sexual, and economic adjustment. We hope to find out whether the surgical approach offers hope for an otherwise untreatable condition.

SUMMARY

In the inauguration of a research project on transsexualism at the University of Minnesota, legal matters were dealt with first. The absence of a state mayhem statute was regarded as pivotal by University attorneys. The Dean of the Medical School and the President of the University were brought in on the discussions as were several hospital committees concerned with patient care. A Gender Committee was then formed consisting of two surgeons, an obstetrician-gynecologist, a psychologist, and a psychiatrist. Reporting of the program by the local press caused no publicity hardship for the University. However, hundreds of letters were soon received from people throughout the world requesting sex-reassignment surgery. The research plan is for surgery to be performed on twenty male transsexuals with long-term follow-up determinations to be made of their emotional, social, sexual, and economic adjustments.

CHAPTER 17

PUBLIC OPINION AND SOCIAL ISSUES IN TRANSSEXUALISM: A CASE STUDY IN MEDICAL SOCIOLOGY

John Money, Ph.D. and Florence Schwartz, B.A.

The youthful field (approximately fifteen years old) of medical sociology has been classified by Kendall and Merton (1958) under the rubrics: (1) social etiology and ecology of disease; (2) social components in therapy and rehabilitation; (3) medicine as a social institution; and (4) sociology of medical education. The largest proportion of contributions to date would probably fall under categories (2) and (3); these studies have been largely descriptive (Freeman, Levine, and Reeder, 1963), employing social research methods which focus either on interview surveys and sampling design, small group dynamics in health institutions, or incidence studies and epidemiology. The sociologist has tended to neglect the occurrence of an unanticipated event which may serve as a generic case for the formulation of an hypothesis. An example of such as event is the institution of an investigational program of therapy by medical experts who are unable to predict the full extent of the influence of their actions upon the public. A descriptive analysis of such a singular, historical occurrence constitutes an example of the phenomenological or case-study method, still insufficiently exploited in medical sociology.

As a case study in medical sociology, this paper examines the impact and feedback between society and the medical profession, with special reference to the press release of November 21, 1966, concerning the establishment of a gender-identity clinic at The Johns Hopkins Medical Institutions, and with reference to selected comparative data from New York, Minnesota, and Los Angeles.

In our society, the stage, carnival, or masquerade are the only places where a male is by custom tolerated to play the female role, or a female the male role. A dichotomous distinction between male and female,

with no allowance for a possible spectrum of variation, makes it impossible for the transsexual to maintain his or her self-respect. The function of sex reassignment as a new medical procedure is to provide yet another acceptable way for resolving the transsexual-transvestite's lifetime dilemma. Endocrine therapy and conversion surgery, therefore, represent an investigative attempt to match the body with the mind and social role.

Included among the source materials are periodical and newspaper articles, and chapters of this book (in manuscript) concerning events related to the investigative study of transvestism-transsexualism at The Johns Hopkins Hospital, and at the comparison institutions. The minutes of the meetings of the gender-identity committee and the patients' charts were available at The Johns Hopkins Hospital. Interview data were obtained directly from the members of the Hopkins Gender Identity Committee, the Director of the Gender Identity Research Clinic at the UCLA Medical Center, and the probation officer on the case of G.L.[1]

Public Relations

Because transsexualism is an emotionally charged issue, public relations played an important part in the establishment of a gender-identity clinic at The Johns Hopkins Medical Institutions (*New York Times,* 1966) and at the University of Minnesota Hospitals (see Chapter 16).

In January, 1960, a thirteen-year-old male, G.L., was referred by his school to the child psychiatry department of The Johns Hopkins Hospital for the suspicious conduct of drawing pictures of nude women and touching girls in the "wrong places" (the breasts) while on school premises. The diagnosis at that time included possible effeminacy. In May, 1961, this same youth was found in an alley drunk, completely nude, and with lipstick on. About a week later he appeared in juvenile court on charges of having taken a purse from a woman's apartment and women's clothing from a museum cloakroom. At this time, the syndrome of transsexualism was diagnosed, and the acts of stealing seen to be adjunctive to the psychosexual difficulty. In May, 1964, the boy was arrested for stealing "eight-hundred dollars worth of wigs." The confrontation with the law and the subsequent psychiatric and probationary consultations prompted consideration of his own request for sex reassignment. The possibility of surgical conversion on the authority of a court order was considered, and the order was issued. Differing views and lack of rapport among the various specialists thwarted prompt action, however, and the patient was, in fact, never operated upon. Among those willing to investigate the sex-reassignment procedure as a

[1] Mr. Larry Kloze, the probation officer for the case of G.L., was instrumental in bringing the problems and possibilities in the treatment of transsexualism to the attention of the courts. He obtained the attentiveness and interest of Judge James K. Cullen. Thanks are extended to these men for their time and efforts.

method of therapy for a specific psychopathology were surgeons for whom this represented a unique experience and challenge to perfect techniques heretofore restricted to the treatment of congenital malformations, and traditionally the province of the urologist and gynecologist, rather than the plastic surgeon. Representatives of plastic surgery were, therefore, interested in joining forces with other specialists to formulate plans that were eventually consolidated in the establishment of the gender-identity committee and clinic. Both became a reality in late 1965.

The committee was composed of a psychologist, gynecologist, plastic surgeon and his senior associate, psychiatrist and his associate in plastic-surgical liaison, endocrinologist, urologist and psychiatrist in neurosurgery. The psychologist was a specialist in psychoendocrinology, with particular attention to the psychology of sexual impairments and deformities. His experience in hermaphroditism had singled him out, over the years, for requested consultations on cases of transvestism and transsexualism, including the above-mentioned patient, G.L., who was followed from the time he presented school behavior problems until the court order was issued. This same patient was referred by the court also to the gynecologist who would become a founding member of the committee. Transsexual patients were referred, or referred themselves, to him because of his prominence in the corrective surgery of hermaphroditism. Other transsexual patients made their first hospital contact through urology, endocrinology, or plastic surgery, from each of which services committee members were drawn. The chief of plastic surgery, a pioneer in rhinoplasty and augmentation mammoplasty, had a particular interest in the application of plastic surgical technique to genital reconstruction in the wake of birth deformity or trauma. He had already attended to the surgical needs of two female-to-male transsexuals. He was instrumental in having his senior associate accept the position of committee chairman. The psychiatrist on the plastic surgical service received his appointment under the chief of the psychiatric liaison service in the light of their proposed duties in the gender-identity clinic and as members of the committee. The psychiatrist in neurosurgery became a committee member because of his interest in the brain, especially the temporal lobe and sexual function.

The first patient to undergo a complete sex-reassignment procedure at The Johns Hopkins Hospital was a Negro male referred by Dr. Harry Benjamin of New York, in February, 1965, following an extensive work-up under the aegis of the Benjamin Foundation program. Having undergone surgical conversion to become a female, this patient claimed to have been offered $800 to grant permission for her story to be printed with photographs in the *Afro-American*, a Baltimore newspaper aimed at a Negro readership. The patient was admonished by her psychologist that premature release of information was against her best interests at this time and, furthermore, could frustrate any future surgical attempts

of the same kind. Therefore, with the cooperation of the editor, the story remained dormant until the fall of 1966, when this same post-surgical patient, living in New York City, was the subject of a brief gossip column entry, its source unknown, in the October 4, 1966 issue of the *New York Daily News*:

> Making the rounds of Manhattan clubs these nights is a stunning girl who admits she was a male less than a year ago and that she underwent a sex change operation at, of all places, Johns Hopkins Hospital in Baltimore. Surprisingly, the hospital confirms the case, saying surgery followed psychotherapy. Such operations, although rare in this country, are neither illegal nor unethical, according to a Johns Hopkins spokesman. Officials at a number of major hospitals here agreed with Johns Hopkins on the legality and ethics of the operations but none could recall such an operation ever having been performed in New York.

About the same time, Tom Buckley of the *New York Times* approached Harry Benjamin concerning interest in a magazine article on transsexualism. He subsequently contacted John Money at Johns Hopkins. This presented a crisis. Still in its pioneer stage, the gender-identity committee was confronted with the dilemma of whether to release information or remain silent. The second alternative could quite easily lead to a sensational, inaccurate account. Even the first alternative was subject to that risk. It was decided to work through the hospital's public relations officers. Their advice was to prepare a formal press release, in the hope that it would appear first in the *New York Times* unabbreviated and unedited. The prestige of the *New York Times* would then set the tone for all other papers copying the story.

The plans worked out exactly as hoped. The published story presented an accurate, objective, scientific account. Lay and religious leaders and critics appeared to be compassionate and to trust the ability and sagacity of the medical profession to make the proper decisions concerning this matter. A sampling of the opinions of Baltimore clergymen, representing a variety of faiths, reported in the morning edition of the November 23, 1966 issue of the Baltimore *Sun*, indicated that thirteen of the clergy voiced approval of the operation while one, an official of the Catholic Archdiocese, declined comment "until all the moral implications can be carefully evaluated." The medical profession had carried the public with it and could continue its investigative work under public endorsement, instead of under the pressure of public censure.

The Minnesota experience resembles that of the gender clinic at Johns Hopkins one month earlier. In both cases, the physicians hoped and planned to conduct their research project behind closed doors and to reveal the findings only at such time as there would be something of a positive nature to report. The adamant desire of the press to publish a story aroused fear in medical circles of premature public criticism. By keeping silent, however, the medical profession was actually neglecting

an opportunity to educate the public on transsexualism. This perhaps may have been a result of its suspicion that the general public is neither sophisticated nor understanding enough to accept in the proper perspective medical treatment of such an investigative nature. However, these fears have proved unwarranted. The capacity of the public and the church to receive the story seriously had been underestimated.

Nonetheless, there is some basis to the suspicion that exists between the medical person and the public. For example, controversy over legalization of abortion has endured and the public, as represented by the church and the law as the adversary, continues to wage a strong battle with reformists within the medical profession. The legalization of homosexuality, on the basis that it is a medical rather than a criminal condition, creates a similar public issue; in several European countries, the medical viewpoint has won out (see Chapters 30 by James, 31 by Stürup, and 32 by Wålinder).

Medicolegal Issue

The difference in perspective between medicine and the law is illustrated in this section by reference to three institutions, the UCLA Medical Center, the University of Minnesota Hospitals, and the Harry Benjamin Foundation of New York, as they compare with Johns Hopkins in their attempt to clarify their respective positions in relationship to the law concerning the issue of transsexualism—an issue with no specific precedent in medical jurisprudence.

The physicians at the Gender Clinic of the UCLA Medical Center decided not to set about creating a precedent for the law to follow, but instead to ask the law if it might find a precedent as a guide. The legal advisor of the university cautioned against what he construed to be a legally risky endeavor. Hence, the case was closed with the result that the only kind of sex-conversion surgery permitted remained the kind already in practice, namely corrective procedures on hermaphrodites whose ostensible, biological errors were unquestionably the "fault of nature."

In New York City, Harry Benjamin treated transsexuals psychiatrically and hormonally (see Introduction). He worked in private practice without hospital affiliations and without surgical facilities in New York. Surgical procedures were referred by him originally to a surgeon in Casablanca, and, in one case, a surgeon in Naples, prior to the establishment of The Johns Hopkins clinic. Thus, Benjamin had no conflict with the law concerning conversion surgery.

Legal issues in the case of the Minnesota project are detailed in Chapter 16 by Hastings. The Minnesota group acted similarly to the UCLA group, that is, by consulting the law first. The absence of a mayhem statute in Minnesota played a pivotal role in the legal decision; other-

wise, the Minnesota attempt would probably have experienced the same fate as that of the UCLA group.

The Hopkins group, on the other hand, pursued a policy that set a precedent for the law to look to. When the case of G.L. arose, the specialists involved in the case, confident of the strength and accuracy of the medical decision about sex reassignment for G.L., did not embark upon the procedure of asking the law what should be done. Rather, events proceeded in such a way that the probation officer, the judge, and the two specialists at The Johns Hopkins Hospital coalesced their efforts to form a liaison between medicine and the law in the event that elective surgical conversion should be challenged in the future. The judge signed a court order for the surgical procedure. This court order would set no precedent unless challenged by a higher court. Nevertheless, the very act of signing a court order placed the procedure within the purview of the law.

The judge attended the inaugural session and one other meeting of the gender-identity committee, and said that he would be available should his advice be further sought. Later, the university lawyer also attended one of the committee's meetings to discuss various legal issues, including surgical consent of next-of-kin and legal name change. There was no direct confrontation, putting a member of the legal profession in the position of interpreting policy. Acting on the basis of professional judgement, the Hopkins group defined the problem as a medical one and thus allowed the law to follow its example.

The fact remains, however, that if the physician performs transsexual surgery, on the basis of his medical judgment, he may be exposed to the possibility of legal prosecution. In various states, a mayhem statute may define specific intent maliciously to maim or disfigure a member of the body as a criminal offense (see Chapter 29 by Holloway). Such a statute descends from English common law and pertains to the ancient practice of attempting to avoid military service by having some part of the body, usually fingers or toes, maimed. Although the medical profession has frequently cited legal mayhem to justify its failure to take transsexual surgical action, this is inaccurate use of the law for two reasons: (1) The courts of feudal England, which first applied this statute, specifically excluded injury or amputation of the genitalia[2] from this law and (2) if medical implications are involved in such a procedure, criminal intent is removed (see Chapter 28 by Sherwin).

In contrast to the risk of criminal liability, a physician may also be exposed to a possible tort liability, if the consent to the operation should be declared invalid. A recent case in Argentina ruled that a transsexual's

[2] Castration for the deliberate production of eunuchs is an ancient practice. In Europe it was legally performed on boy sopranos until well into the 18th century to provide soprani castrati for the opera and papal choir (see section on voice, Chapter 6).

consent to conversion surgery is unnatural and invalid, and the surgeon was therefore liable in tort for assault (see Chapter 29 by Holloway).

Potential liability notwithstanding, the fact is that in the United States there is no history of a test case pertaining to removal of the gonads or other parts of the sexual anatomy, though not through lack of opportunities. Had anyone been so disposed, many suitable test cases could have been found among individuals born with the sexual ambiguity of hermaphroditism. The fact is that patients, the public, and the law appear content to leave the physician well enough alone to perform his proper professional services in trying to ameliorate the plights of individuals afflicted with sexual anomalies and the misery they entail.

Doctor-Patient Relationship and the Law

When the unreassigned transsexual cross-dresses and visits his doctor, the physician may be in an ambiguous position with regard to the law if there is a local or state ordinance against transvestism. The ambiguity resides in whether the physician should, out of consideration for the law, report the patient to the legal authorities, or whether he, under the protection of medical confidentiality, should protect the patient who has consulted him in confidence. One has here an example of the great split between the nonjudgmental tradition of medicine and the judgmental and prosecuting tradition of law. In Maryland, there is no specific legislation against the physician's treating a transsexual who appears at his office cross-dressed. There is also no problem for the discreet patient who simply appears cross-dressed in Maryland, for this state has no explicit statute, like the anachronistic statute in New York, making it illegal for males to dress in female attire and make-up.

In The Johns Hopkins Gender Identity Clinic, it is required that the patient live vocationally and socially as a woman for a certain period (six months to two years) prior to and upon hospital admission. Harry Benjamin, treating patients who have presented themselves cross-dressed in his New York office, and the gender clinic at the UCLA Medical Center, accepting the patient cross-dressed upon admission, are aligned with the Hopkins position. In contrast, at the University of Minnesota Hospitals, the patient is, in the interest of legality, asked to dress in the attire of his or her anatomical sex until surgery is performed, even if the patient has not owned or worn such clothes for years. However, cross-dressing is requested for preoperative photographs and interviews with the gender committee (see Chapter 16 by Hastings).

Vital Statistics

The Johns Hopkins experience, in regard to vital statistics and particularly birth-certificate change, had its antecedent in a test case

in New York in 1966 (see Introduction). In New York, the sequence was one in which the medical profession put pressure on the law to set a precedent for birth-certificate changes for transsexuals. With the knowledge of hindsight, it might well have been better had the medical profession aimed to create a precedent, accumulated case by case, decision by decision, in many different places, rather than setting a test for an overall decision prematurely.

In the New York ruling, as embodied in the 1966 decision of the Supreme Court of New York entitled *Anonymous* v. *Weiner*, a surgically converted male-to-female transsexual had applied to the New York City Department of Health's Bureau of Records and Statistics for issuance of a new birth certificate containing only the new designation of sex. Inadequate understanding of the transsexual phenomenon and its wider implications led this committee to oppose the petitioner's request (New York Academy of Medicine, 1966).[3] In this case, sex chromosomes were assumed to be the ultimate criterion for the determination of sex, which is absolutely untenable in the case of, among others, the testicular feminization syndrome. This latter syndrome, in which a phenotypic female has male chromosomes, is such that any or every member of the advisory panel could have a wife so affected, and yet have no suspicion of it. He could be accused of being a homosexual on the basis of the ruling he voted to establish!

In contrast to the New York experience, in which the law was asked to set a precedent, the medical profession in Baltimore took initiative to guide the city and the state in adapting administrative precedent for birth-certificate change. In 1967, one of The Johns Hopkins Gender Identity committee members spoke with an official of Baltimore City's Bureau of Vital Statistics. This official interpreted a ruling to allow a name change on the birth certificate as a sequel to a court-ordered name change, the latter requiring a surgeon's letter and an attorney's services. On the birth certificate the name can then be amended, and the sex also, to conform to the new legal name. Kept in a sealed envelope, the amended certificate may be necessary for certain legal and governmental purposes, perhaps, for example, a passport. The purpose of maintaining this original document is to permit continuity of legal identity for the purpose of such records, as those of schooling, marriage, divorce, social security, inheritance, and so forth. Sufficient for most purposes, however, a short form certificate of birth carrying no evidence of sex reassignment is issued. For handling cases of residents in the counties of Maryland, it was necessary to approach the Bureau of Vital Records of the Maryland State Health Department. Once more it was established that the name should be changed by court order, and the procedure followed as above.

[3] See also, however, Introduction by Benjamin, note 1, p. 6.

In addition to the birth certificate, other documents which the patient may have to have altered are driver's license, social security registration, insurance policies, deed and property titles, divorce certificate, and in the case of a former male, selective service registration. Once the birth certificate change is made, the rest follows with relative facility. Change of name on academic records may pose a problem, but that need not necessarily be the case. The dean, registrar, and other personnel may, with letters from the patient's physician and lawyer certifying that a change of name and sex is authentic, find the authority they need to reissue the academic record with changed name and sex. It is understandable that the university may want to retain evidence of the individual's past legal identity as a properly qualified scholar, and not an imposter, especially in the case of doctoral and other higher degrees.

Regarding marriage, one can obtain a license in some states, including Maryland, without a birth certificate. Thus, the sex-reassigned transsexual may marry and will encounter no legal problems in this act. Whether he or she should do so, is a subject that readily arouses debate. The answer is not to be obtained by fiat, but in the record of the performance of reassigned transsexuals as they are followed over the next few years.

Freedom of Choice

The philosophical question of freedom of the will and free choice with reference to a patient's right to acquire a sex change was not brought up for specific examination among members of The Johns Hopkins Gender Identity Committee. It was simply assumed that, according to the traditions of medicine, the experts would make the decision concerning the diagnosis, suitability, and acceptance of applicants for surgery. Therefore, sex reassignment may not be obtained as a whim or caprice of individual choice in the manner in which a person decides to get his body tattooed. The committee set certain preliminary criteria:

1. The patient must have lived in the desired sex vocationally and socially for a long enough period of time to prove his (or her) ability to function in society in the changed sex.
2. The patient must be at least twenty-one years of age.
3. The patient must have had a police record that was clear, though impersonation convictions are allowable.
4. If the patient had a history of temporal lobe epilepsy, he would require a neurosurgical work-up, with a view to relief of both seizure and psychosexual symptoms as a sequel to brain surgery.
5. The patient had to have legally dissolved an existing marriage bond.
6. The patient must live within accessible traveling distance to The Johns Hopkins Hospital in order to ensure conscientious follow-up.
7. The patient must designate a next-of-kin as an additional informant willing to give written operative consent. The reason for this rule is:

(*a*) to safeguard against erroneous personal and social history-giving; (*b*) to safeguard against malpractice charges on the part of the next-of-kin; (*c*) to have the guarantee of at least minimal family acceptance of the operated patient, should there arise an emergency in the future; and (*d*) to improve the social chances of rehabilitation.

Inherent in these criteria is the age-old medical tradition of not blaming the patient and not passing judgment. It is in this tradition that medicine (though not all physicians individually) diverges sharply from the judiciary and, to a lesser degree, from the church. The divergency is well illustrated in another psychosexual pathology related to transsexualism, namely homosexuality,[4] which the church has viewed traditionally as a sin, the law as a crime, and medicine as a develop-

[4] The legal system, constituting the conscience of society, is subject to changes in social attitude, although there is often considerable time lag between the alteration of daily practices through attitude change and written legal documentation of this change.

The case for homosexual law reform serves to demonstrate the issue. On July 27, 1967, the Wolfenden recommendations, urging that homosexual acts between consenting adults in private be removed from the criminal statutes, became law in England. In 1954, England had witnessed the sensational trials of Lord Montagu, who, acquitted of charges of indecent acts with boys, was tried for committing homosexual acts in private with consenting adult males. With the increase in the number of arrests of homosexuals about this time, it was soon exposed that the Montagu episode was but one dramatic illustration of a concerted official effort to ferret out homosexuals. As contrasted with 1,666 arrests for homosexual offenses in 1950, there were 2,504 such arrests (a two-thirds increase) in 1955. "Public response to the trials soon shifted from an initial expression of revulsion at such behavior to outrage not only at the methods used by the police to obtain evidence, but also to a course of action which seemed to constitute a witchhunt" (Essays on Homosexuality, 1968). Criticism of the prosecutions by prominent churchmen and public figures elicited the appointment of a special committee, headed by Sir John Wolfenden, to investigate current laws and make appropriate recommendations thereon. The committee's decision to advocate the legalization of homosexuality between consenting adults in private was received favorably by the metropolitan press, while opposed by the provincial press. In 1960, the Home Secretary summarized the legal view at that time as being sympathetic to homosexuals, but unable to institute ameliorative legislation which might be misunderstood as approval of what was still publicly conceived of as immoral conduct. However, the next five years witnessed a lively debate in the press, and by 1966 a public attitude change was apparent. Public opinion polls showed 63 percent of the population in favor of the Wolfenden recommendation, and by 1967 the law reflected it.

On the continent, homosexuality between consenting adults is not subject to legal prosecution in France, Spain, Italy, Belgium, Holland, Denmark, Switzerland, Czechoslovakia, Greece, Poland, Turkey. In the United States, where the same act is prosecuted, a change will come as part of the comprehensive recodification of penal statutes designed to bring the whole of criminal law up to date and into accord with professional practices and principles (Essays on Homosexuality, 1968).

Cleric and lay attitudes were in harmony by the end of the decade of British debate, the clergy having actually liberalized its attitudes first. In the case for transsexualism, the attitude of the clergy and lay public also seems tolerant and sympathetic. Thus, there is no rationale for the perpetuation of legal measures based on religious attitudes which themselves are no longer extant.

mental anomaly. A sin and a crime are ostensibly acts of free choice; a developmental anomaly is not.

Other instances in medicine where the issue of freedom of choice arises are cases of abortion, birth control, artificial insemination, and sterilization procedures. From a disengaged, theoretical perspective, the decision should be one involving only the patient and his physician acting as the informed authority. Yet, in everyday practice, the individual does not always have freedom of choice. Society and the law act as mentor for the individual.

Transsexualism joins the ranks with these other controversial issues of free choice. However, in the case of transsexualism, the individual and society are not pitted against one another. As demonstrated in The Johns Hopkins experience, the controversy can be recast in a different framework whereby the reassignment procedure is justified to both society and the individual on the grounds that, though it is not a cure, conversion surgery constitutes an investigative, ameloriative therapy which helps the patient to live a more contented and productive existence which could not otherwise today be achieved.

Education

To ascertain the attitude of the gender-identity committee on the wisdom and necessity of a press release publicly announcing the establishment of their project at The Johns Hopkins Medical Institutions, eight of the nine committee members were interviewed retrospectively. The ninth was unavailable. Two of the eight approved of the release of information. Their reasoning rested on the conviction that public curiosity regarding matters of sex is strong and warrants accurate information, particularly when the viability of an investigative project is contingent on public approval. Four members of the committee intimated that they were skeptical about lay and clerical acceptance, but once the story had already leaked out to the press, there was no alternative except that of giving an accurate and objective account of the situation. Two other members stated opposition to the 1966 press release, basing their decision on the fact that the project was only a pilot investigation with no concrete findings, so that material published prematurely might well possess potentially erroneous claims.

In addition to these reactions, four of the above respondents spontaneously and independently expressed consternation over the fact that the newspaper account had triggered the influx of over a thousand letters of pleas for sex reassignment, not to mention the numerous phone calls and unannounced out-of-state and out-of-country visits by distressed individuals in quest of the operation. Two of these four committee members were among those who regarded the decision to release a story to be the lesser of two evils, one was aligned with those opposed to information release, and one was in favor. Their consternation was

contingent on an overwhelming feeling of frustration due to inability to provide assistance in the face of so many hundreds of inquiries, the Hopkins clinic being equipped to evaluate and schedule no more than one admission monthly.

The religious or moral positions of the Hopkins committee members was not asked for. The attitude of physicians in general toward sex reassignment can be derived from the questionnaire investigation reported in Chapter 15 by Green. The majority appeared to be very conservative. Authoritative and respected, physicians are well qualified to induce liberalization of society's attitudes with respect to transsexualism and related disorders. Yet, the majority neglect their pivotal role in the arena of public education. Themselves conservative and cautious, they underestimate the laymen's comprehension, sophistication, and tolerant willingness to learn about the realm of psychosexual pathology.

The conservatism of many physicians toward transsexualism may, in all likelihood, be a product of their own lack of first-hand experience with transsexual patients. In postgraduate medical education, there is no better way to offer instruction on this condition than to present a patient in person and interview him or her before the postgraduate audience of physicians. Then their attitude toward the patient and the disease changes to be more favorable to sex reassignment.

The layman's comprehension of psychosexual pathology was exemplified by public readiness for scientific information, as judged by *Time* (1968b), regarding the sex chromosome anomaly XYY and its possible, but as yet unproven influence in producing an impulsive and maybe delinquent personality. An abnormal sex-chromosome pattern is known also to exist in Klinefelter's syndrome, Turner's syndrome, the triple-X syndrome, and some instances of hermaphroditism, not to mention the many autosomal anomalies. The way is thus open, by way of the new science of behavior genetics, to a shift in public opinion from treating the behavior of affected individuals with ridicule or punishment, to recognizing it as a by-product of hereditary error, needing regulation. No genetic abnormality has, to date, been reported responsible for the behavior of the transvestite and/or transsexual. Yet one may not arbitrarily close one's mind to the possibility that the behavior of these individuals, also, may be a by-product of an as yet undiscovered hereditary error or partial error. It seems feasible that continued accurate dissemination of information on transsexualism and transvestism could increase the amount of favorable public response to the need for revision of the laws concerning transvestism and eventually, perhaps, the related and more frequent problems of homosexuality.

Surgical Technique and Benefits to Society

Aside from the obvious motivation to perform conversion surgery on transsexuals in order to ameliorate their condition and help these

individuals to find a happier existence, there are wider implications emanating from the procedure. Technical contributions to the field of reconstructive genital surgery could be of paramount importance. Review of the literature reveals thirty-three reported cases of infants with congenital agenesis of the penis (Kosto and Scott, 1968). Of the twenty-two who have survived infancy to become otherwise normal males, four have undergone cosmetic plastic surgery to create a phallus and/or conduit with which to direct the urinary stream. A true erectile penis has not yet been created through plastic construction. It is fortunate that congenital absence of the penis is rare; however, its scarce occurrence limits opportunities to perfect surgical techniques for correcting those varying degrees of injury inflicted to the male organ by the more numerous hazards of daily life, including war. Surgical investigation in the treatment of transsexuals could serve the dual function of creating a more tolerable existence for the transsexual while simultaneously creating a tradition that will expand to include organ transplants, beneficial to thousands of men and women, both.

Discussion

Outstanding and successful applications of mathematical and statistical techniques in science have created an atmosphere dichotomizing scientific method into experimental versus observational, hard versus soft, cross-sectional versus historical, and so forth. The dichotomy is not, in fact, tenable. Research methods may be regarded as varying only in the ratio of description to analysis, so that one may properly view all scientific investigation as employing only one scientific method. The goal is the same whatever the ratio of description to analysis, namely, integration of the descriptive data into an analytical model for construction of a general working hypothesis (Siever, 1968).

The objective of scientific investigation is the formulation of a general hypothesis, which may eventually acquire theoretical status, from specific observations of reproducible phenomena. The means to such an end vary from discipline to discipline. The astronomer cannot study the advent of a meteor whenever or how often he pleases, nor can he study it in toto in its virginal relations to the larger system of which it is a part. Likewise, the geologist is also forced to look in retrospect at the residuals of a chance event. Once such an event has occurred, it cannot be reproduced, though it may be possible to study some of its components in a laboratory situation. A one-time occurrence of an event does not permit us to call that phenomenon unique; it is unique only in our limited observational history and it does not exclude the possibility of such a single occurrence being the example for a generic class of such phenomena (Siever, 1968).

The case study, as an example of the single-occurrence phenomenon, contributed powerfully to the development of medical science in the

nineteenth century, and still continues to do so, even though it is no longer fashionable to publish extensive case reports. The case method contributed also to the development of clinical psychology and medical psychology. The method is now widely applied to the study and teaching of business and law. It has not been widely used in sociology, where fashion has favored statistical, cross-sectional studies. The subject-matter of sociology lends itself, however, to the case-study method, which deserves much greater use. In medical sociology, this present report serves as an example, since it may, in fact, be the first of its kind.

SUMMARY

In the fall of 1966, following a news lead, the press requested a story concerning the establishment at The Johns Hopkins Medical Institutions of a gender-identity clinic for the evaluation and treatment of the transsexual by means of elective sex-conversion surgery and hormonal substitution treatment. The committee in charge of the clinic was apprehensive about public acceptance of the story. Confronted with the crisis of volunteering accurate information or keeping silent and thus running the risk of inaccuracy and sensationalism, the committee, acting through the hospital's public relations office, decided to give the press a story. To the happy surprise of this medical group, an accurate account of the project, released on November 21, 1966, was favorably received by the lay public and also the clergy. By treating the public maturely and in confidence, the medical profession received in turn a vote of public endorsement that made the pursuance of its new work feasible without legal or pressure-group harassment. The medical profession thus assumed also a new position of leadership in shaping public attitude toward a reform of its outmoded taboos on sexual psychopathology.

APPENDIX TO CHAPTER 17

Press Release of November 21, 1966
The Johns Hopkins University and
The Johns Hopkins Hospital

STATEMENT ON THE ESTABLISHMENT OF A CLINIC FOR TRANSSEXUALS AT THE JOHNS HOPKINS MEDICAL INSTITUTIONS

A Gender Identity Clinic to deal with the problems of the transsexual, physically normal people who are psychologically the opposite sex, has been established at The Johns Hopkins Medical Institutions. Dr. Hoopes, as chairman of the Gender Identity Clinic staff, serves as spokesman for the group, which includes: Dr. Dietrich P. Blumer, assistant professor of psychiatry; Dr. Milton T. Edgerton, professor and plastic-surgeon-in-charge at Johns Hopkins; Dr. Howard W. Jones, Jr., associate professor of gynecology and obstetrics; Dr. Norman J. Knorr, assistant professor of psychiatry and plastic surgery; Dr. Claude J. Migeon, associate professor of pediatrics; Dr. John W. Money, associate professor of medical psychology and pediatrics; Dr. Eugene Meyer, professor of psychiatry; Dr. Horst K. Schirmer, associate professor of urology; and Mr. C. Frank Velkas, a psychologist and associate of Dr. Money.

Dr. John Money has long been an outstanding psychologist engaged in pioneering studies on the transsexual patients seen at Hopkins. His interest encouraged Dr. Jones and Dr. Edgerton to undertake surgical treatment on some of these early patients. These experiences convinced both that a definitive study should be initiated. Dr. Edgerton then asked Dr. Hoopes to establish the Gender Identity Clinic. Dr. Hoopes said that it was only after much study and soul-searching that the full team was assembled and they embarked upon the project: "After exhaustively reviewing the available literature and discussing the problem with people knowledgeable in this area, I arrived at the unavoidable conclusion that these people need and deserve help." He said that the staff, prior to accepting its first patient, studied the problem in all of its dimensions: scientific, ethical, religious, and legal.

Dr. John E. Hoopes, the assistant professor of plastic surgery and chairman of the clinic staff, said the Gender Identity group has been in operation for one year. The staff has seen a few dozen patients, has completed surgery to change the external manifestations of sex in a small number of patients, and has initiated the surgical procedures in several additional patients. The clinic staff has limited itself to accepting two patients a month for initial evaluation. Many have been referrals from The Harry Benjamin Foundation of New York. The leader and namesake of this organization, a physician, has worked with transsexuals for many years and is the author of a medical book on the subject: *The Transsexual Phenomenon.* The Benjamin Foundation was endowed by the Erickson Educational Foundation, which also is

the sole source of research support for the Hopkins endeavor. Aside from the Foundation's patients, there have been requests for surgery from more than 100 other individuals who have heard of the clinic.

Dr. Hoopes emphasized, "This program, including the surgery, is investigational. The transsexual has never previously been given adequate medical attention. The most important result of our efforts will be to determine precisely what constitutes a transsexual and what makes him remain that way. Medicine needs a sound means of alleviating the problems of gender identification and of fostering public understanding of these extremely unfortunate individuals. It is too early in the program to be either optimistic or pessimistic. We are still in the process of collecting accurate observations on the results of treatment."

A transsexual is normal physically and biologically, at least in so far as can be determined at present; but he feels, behaves, and dresses as if he were of the opposite sex. Most transsexuals begin to show signs of their problem at age four or five; usually, for example, they have no interest in the childhood play activities of their sex. They often make the change in type of dress and social presentation while in high school or shortly thereafter. Far from living lives in the shadows of society, some of them, at least, after assuming their new identities graduate from college and go on to become successful in business or other endeavors. "Our patients are not psychotic but do have extreme adjustment difficulties because of their problem; they feel that nature has somehow gone awry, almost as if their mind is in the wrong body," Dr. Hoopes said. "You would probably never recognize a transsexual as such if you met him casually, or even if you knew him well. I cannot state too emphatically how completely these people assume the role of the opposite sex. The male transsexual looks, dresses, and acts exactly like a woman, and the same is true for his female counterpart. They are not simply transvestites, people who receive pleasure from just wearing the clothes of the opposite sex; nor are they homosexuals, as commonly defined." An overwhelming majority of transsexuals are men, and so have been most of the clinic's patients. All races are affected. How many transsexuals are there in this country? Dr. Hoopes said, "There is no way to get at the exact number, but at the minimum there are thousands."

"Over the years, psychiatrists have tried repeatedly to treat these people without surgery, and the conclusion is inescapable that psychotherapy has not so far solved the problem. The patients have no motivation for psychotherapy and do not want to change back to their biological sex. The high incidence of suicide and self-mutilation among these people testifies to the magnitude of the problem. If the mind cannot be changed to fit the body, then perhaps we should consider changing the body to fit the mind."

The clinic staff meets once each month. A four-step process for screening, evaluating, treating, and following the patients has been established:

Step 1: The potential patient is first thoroughly interviewed, tested, and evaluated by a psychiatrist, a psychologist, and the surgeons. The clinic accepts only the non-psychotic transsexual, the patient whose major apparent anxiety is the haunting fear that he will be discovered. Family and personal histories are being collected and studied meticulously. Scores of examination techniques are being employed. "Many of these studies may prove to be blind alleys," Dr. Hoopes said, "but we wish to find out as much as possible about these people and how to help them. There is no known common denominator among transsexuals, so we are looking for one." The findings are presented to the entire staff for a decision as to whether the

outlook is sufficiently optimistic to accept the person as a patient and enter him into phase two of the study.

Step 2: More psychiatric testing is completed. Endocrine and other metabolic and chromosomal studies are begun. A trial of hormone therapy to effect body changes toward the desired masculine or feminine direction is an important aspect of Step 2. Advancement of the patient to phase three requires another decision by the staff on the basis of the additional data.

Step 3: A surgery team skilled in plastic, gynecologic, and urologic techniques performs an operation, or series of operations, to transform the patient's external sex organs into those of the desired sex.

Step 4: The patient is followed by the staff for an indefinite period of time, probably for the remainder of his life, coming back periodically for study, evaluation, and if necessary, further treatment. His total adjustment and contribution to society are major yardsticks of the value of treatment. "Step 4 is probably the most important phase of the entire program," Dr. Hoopes said. "It is at this stage that we will measure our success or failure, that is: are these people happier and more useful citizens following surgery and other therapy than they were before?"

"I want it clearly understood," he added, "that I and the other members of the clinic committee must be very circumspect in public discussion of our activities. Anonymity must be preserved for our patients. Anything else not only would be improper, but it would be inimical to the patients' welfare. These patients wish only to try to build new, happier lives for themselves after leaving Johns Hopkins. The staff, however, decided that I should discuss the problem of transsexuality and the efforts of the clinic in an effort to gain some public understanding and sympathy for the problems of the transsexual and for what we are trying to achieve."

CHAPTER 18

PSYCHIATRIC EVALUATION OF MALE TRANSSEXUALS FOR SURGERY

Norman Knorr, M.D., Sanford Wolf, M.D.,
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Definitive criteria for selecting transsexual patients for sex-reassignment surgery can evolve only when the long-term psychosocial adjustment of those patients who receive surgery is evaluated. Currently, the selection of patients to undergo transsexual surgery for the purpose of treatment and the collection of necessary data is controversial, exceedingly difficult, and in some cases loaded with maximal anxiety.

This chapter presents an introductory outline for the psychiatric evaluation of transsexual patients and discusses the difficulties and problems these patients may present when they request sex-reassignment surgery.

The following report is based on the data obtained from sixteen transsexuals, twelve males and four females, who have been evaluated in the last year at The Johns Hopkins Hospital. Of these sixteen patients, nine have received or are in the process of receiving surgery for sex reassignment. Because only four females have been evaluated, this report will emphasize the psychiatric evaluation of the male patient.

In the psychiatric evaluation of the transsexual for reassignment surgery, the interview is the principal instrument for obtaining data, although psychometric testing, medical reports, and the records of public institutions are also important. The psychiatric interview, always a difficult and subjective procedure, is rendered even more difficult by two factors: 1) the relative scarcity of information on the transsexual syndrome and concomitantly the problem of delineating transsexualism from other problems of sexual identity; and 2) the distortions and external pressures inherent in the interview.

Scarcity of Information and Problem of Delineating the Syndrome

The reasons for the first factor are not hard to discern. The transsexual syndrome is not of common occurrence, and reports that deal with the problem contain relatively small series of cases. There are some early reports of symptom complexes which appear in retrospect to be cases of transsexualism. It must be noted, however, that these reports are scattered both temporally and geographically; this raises questions about the kinds of criteria that were applied, as well as the state of psychiatric knowledge and diagnostic prowess in the periods in which the cases were reported.

Suffice it to say that there appears to be a wide spectrum of the form in which distortion or reversal of sexual identity may occur. Though the authors believe that the syndrome of transsexualism exists, the overlap of transsexual cases with other problems of gender identity does not make the evaluation of any single case an easy one, nor does it simplify the deciphering of earlier reports which grouped various disorders of psychosexual identity under one diagnostic term.

The transsexual syndrome unmistakably falls into the category of human behavior which bears, in society's judgment, the stigma of sexual deviance and is thus taboo. Inherent in this censure is the multitude of laws, social restrictions, and popular fears which tend to cloud and confuse the issue. These societal problems are inseparable from the medical ones and make it less likely that physicians, fearing harm to their patients, will share their knowledge on the subject or report cases to state registries. Exceptions to this protective attitude are case reports from large hospital departments of psychiatry and group projects in large institutions, all of which carefully mask the patient's identity.

From the patient's point of view, the social stigma of transsexualism tends to maintain silence about all but the most desperate cases. Those whose symptoms can be tolerated within their present life situation are more likely to bear with their difficulties than to seek help with its attendant dangers. A by-product of this attitude seems to have been that many patients have sought surgery in a number of diverse settings outside the United States. Though some of these patients come to the attention of physicians in this country, it is difficult to know what proportion they represent of the total, and how their results compare with others who have undergone surgery under similar circumstances. Moreover, surgeons in these diverse and scattered places may or may not communicate with others, or follow patients who come from great distances.

In sum, then, the transsexual syndrome is similar to such problems as homosexuality and abortion, in that legal and social issues are inseparable from medical concerns, and serve to decrease and distort available

information on the subjects, and to render attempted treatment more difficult.

External Pressures Bearing on the Interview

In any psychiatric interview the patient reports those troubling feelings and thoughts which have led to the visit. The psychiatrist is committed to listen, comment in a manner that will make the patient's words or actions more understandable, and focus, according to his training, on important areas of past or present history. While viewing the data objectively, he is able, hopefully, to empathize with his patient and, more importantly, to understand him. In keeping with the data he has heard and observed in the best manner possible, the psychiatrist is expected to act in a way helpful to the patient.

Occasionally, when a decision must be made where an immediate secondary gain may result, outside pressures are brought to bear on the parties taking part in the interview; this can occur, for example, in situations in which the issues are either commitment to an institution or deferment from military duty or court trial. To the extent that these pressures are present, there is the potential for distortion exceeding that normally present in an interview.

In interviewing the transsexual patient as part of evaluation for sex reassignment, this factor of external pressure and resulting distortion is quite significant. These patients are often highly intelligent and nearly always sensitive to the fact that the results of the interview will play a major role in the Gender Identity Committee's decision. The high degree of their motivation to obtain surgery may be expected to influence strongly their response to questions. This is likely to be true even if they have the strongest desire to speak straightforwardly and honestly in the hope of gaining the greatest understanding and relief. It is difficult for the patient to avoid feeling that the interview is a hurdle to be leaped over and that the psychiatrist is a judge. One may add that it is difficult for the psychiatrist to avoid similar feelings.

The transsexual's desire to convince the psychiatrist of his plight and his need for surgery may be concomitant with a skewing of memory, such as has been reported by Worden and Marsh (1955). The patients appear consistently to remember only that history which includes their feelings of belonging to the other gender. This behavior might appear to be rationalization and a means by which the patients can blot out their past history of normal gender role activity, if it in fact existed. Since the histories given by these patients are heavily biased by conscious and unconscious elements, interviewing of parents and other family members is necessary for thorough evaluation. These ancillary interviews do tend, however, to corroborate that the patients were always different from other children. Parents themselves frequently report that a son tended to be "mother's helper" and played with girls more than

boys, or that a daughter had always been very much a "tomboy." In a few instances, patients had been treated by their mother as if they were of the opposite sex; for example, a boy had been dressed in girl's clothes until the age of six.

Many transsexual patients had been previously evaluated by psychiatrists and perhaps have had a trial of psychotherapy, usually in adolescence. Transsexuals may report that this experience was anxiety provoking and not something they wanted or found useful; they state it was the family's attempt to "straighten out" the patient's problems. With these past experiences in mind, the patients may be defensive and assume that the psychiatrist will try to convince them that their adopted gender role is inappropriate and that their psychosexual orientation should be changed back to normal.

Compounding this defensiveness and leading to high anxiety in these patients is their sensitivity and quickness to perceive the gender role the interviewer assigns to them. If the psychiatrist does not accept them in their adopted gender role, the transsexuals feel rejected, become angry, sometimes hostile, and may attempt to provoke guilt. Their behavior seems intent on forcing their adopted gender role upon the environment, and they show significant emotional gratification if it is accepted. If they are threatened or challenged by one person in respect to their adopted gender, they will align themselves with another person who seems accepting, and subtly manipulate him into imposing acceptance of their acquired gender role onto others of the community. This may lead to complications and problems within a gender identity committee when the patient's evaluation for surgery is in progress. It is essential that the committee, whose purpose is to assess the potential benefit of surgery for these candidates, communicate freely with one another about the difficulties and manipulations of these patients.

Grouping of Transsexuals

Although it is unwise to generalize in regard to patients, it is convenient and useful for us in our assessment to separate the male transsexuals who come for evaluation for surgery into two groups.

The first to be considered are the transsexuals who have inadequate social and moral judgment and a long history of petty and sometimes major criminal offenses. They are usually unreliable, and their social judgments may approximate that of the criminal in many respects. There is frequently a history of homosexual behavior, usually in the passive role. They frequently present as hysterical males dressed in dramatic and seductive female clothing. They wear the latest fashions, sweeping hairdos, and heavy facial makeup. They have accomplished dressing so that they pass convincingly as female, and the casual observer usually finds it impossible to identify them as male transsexuals. It is this group that is exhibitionistic, seeming to delight in having pic-

tures taken and prone to seeking jobs as entertainers. They seem to have fully adopted the opposite gender role sometime in late adolescence. It would seem that these patients' adolescent experience never reinforces the superego struggle against the transvestic and antisocial behavior. Since there is no evidence, to date, that surgical alterations inevitably reduce the antisocial behavior, a gender identity committee must decide whether to risk surgery on patients with this type of character problem. The committee, if it decides affirmatively, risks strong criticism from one or many sources. The Gender Identity Committee at The Johns Hopkins Hospital has decided to take a number of these patients in order to determine if changes can be effected in their inadequate psychosocial adjustment.

In contradistinction to the above are the second group patients, who do not participate in antisocial behavior. These patients may have tried unsuccessfully to make a heterosexual adjustment, and they seem to adopt the new gender role sometime after adolescence. They may have married and perhaps produced children. Many have not participated in homosexual behavior, and they have rarely acquired police records. These patients seem more reliable historians and are usually not as flagrantly manipulative as the antisocial group. The emotional pressure these patients feel to change gender role in considerable. They report considerable chronic depression, and it is likely that it is this group which strongly considers suicide. In many cases they have sought psychiatric help but found it to be useless. They may be college graduates and have attained a significant position in the community life. It is often difficult for the evaluator to conceive that they will give up their vocational and economic achievement in preference for the "sex-change" operation.

Criteria Currently in Use for Surgical Selection

The criteria we are currently attempting to apply in the selection of transsexuals for surgery can be divided into four categories: 1. Is the patient authentically motivated? 2. Is the patient psychotic? 3. Will the patient undergo sociocultural crisis if he receives the operation? 4. Is the patient a candidate for psychotherapy?

In the first criterion we consider whether the patient truly fits the transsexual pattern and is not motivated for surgery by some transient situational event. We again emphasize that, to fully understand the patients' motivations, one must recognize the importance of interviewing the patients' parents, other close relatives, and spouse or lover. We have avoided the consideration of patients who seek surgery, usually through the court or a lawyer, as a means to avoid criminal prosecution. A patient who is depressed following recent separation from a homosexual partner may also be considered in the "transient situational" category and should not at such a time of crisis be considered a candidate. Pa-

tients are not acceptable if there are indications of ambivalence, with the attendant possibility of their wishing to revert back to their original anatomic gender at some future date. The ambivalence may be part of the "transient situational crisis" just mentioned. Though there may be exceptional circumstances, adolescents, in particular, frequently demonstrate ambivalence of this type. A recent example is a seventeen-year-old boy who joined the Army to prove he could be a man; his enlistment occurred some six weeks after requisitioning evaluation by our Gender Identity Committee.

Recalling the earlier description of the first type of transsexual, one notes that it is difficult to differentiate the male transsexual from the passive male homosexual who is in conflict with his homosexuality. Our use of the word "conflict" here implies anxiety, guilt, or anger that may be experienced by a male homosexual due to unconscious or semiconscious feelings that make his activity or self concept as a homosexual unacceptable, though his basic homosexual orientation may remain unchanged. One may consider that the difference between the transsexual and the passive male homosexual (most especially one who is also transvestic) is the quest for surgery. This hypothesis, however, does not probe the possibility that surgery might be the means by which these homosexuals, who are in conflict with their homosexuality in the manner described above, may escape their conflict by the removal of the evidence of masculinity while retaining the homosexual "love object." In any event, the homosexual who is not in conflict with his homosexuality has no motivation for such a surgical procedure, and in fact takes pleasure in the possession of his penis.

We consider the transsexual syndrome not as a conflict concerning homosexuality per se, but as a conflict antedating genital sexuality. This would place the etiologic factors of transsexualism in the age of psychological maturation, development, and perhaps imprinting, preceding this phase of genital sexuality; the surgery is seen by us as an attempt by the patient to become asexual, and then appear female to fulfill infantile needs, the origins of which derive from this pregenital period. Thus, we agree with the findings in Worden and Marsh's series, and the views of Northrup (1959) and Stoller (1966a) in single case reports. The infantile pregenital needs in the dynamics of the male transsexual are evident if one notes that the patients report that they are willing to give up orgasm following surgery, though some state that they hope to attain it, if possible, in the opposite sex role; the sexual motivation in heterosexual activity seems to be to please the male partner; very importantly, the male transsexual desires and seeks love, not as a woman, but as a young girl wishing to be admired, wanted, and fondled.

Our evaluation suggests that, in most cases, the opposite sex role (feminine) was assumed prior to involvement in a homosexual relationship, if any. Before surgery, whatever sexual activity has occurred, the

male transsexual vehemently denies that he is homosexual. Conversely, he describes his partner as heterosexual. Following surgery, a male transsexual in the female copulatory role often gets quite angry and depressed if the male partner suggests practices which, even in the patient's newly acquired female anatomic role, suggest homosexual involvement (if this occurs, it is usually a request for oral or anal intercourse). This response also applies to those patients who have never had homosexual experience. They accredit their anger to feelings of "being made to behave like a homosexual." Male transsexuals state that their wish is to approximate the opposite sex as closely as possible. For this reason, before and after surgery, they use hormones; they occasionally have had rhinoplasties; and they thoroughly practice mannerisms which are convincingly feminine. The attitudes and dynamics described above are important in our evaluation of patients and, especially, in discerning the differences between the passive masochistic homosexual and the transsexual.

The second criterion to be considered is whether the patient is psychotic. In our experience, it is rare that a transsexual patient is also schizophrenic. However, it is generally accepted that some schizophrenic patients have a deep confusion in sexual identification and gender role, and they may seek a change in sex or, rarely, attempt self-castration. Our Gender Identity Committee at The Johns Hopkins Hospital has received a number of requests for sex-reassignment surgery from schizophrenic patients; these requests have been denied. The schizophrenic patient should be excluded from the program.

This raises a larger issue that has been the nidus of much discussion. The belief has been expressed by some, usually in unstructured group discussion, that anyone requesting surgery involving castration must, by definition, be psychotic, no matter how unexceptional his behavior and how ordered his thought processes in areas other than gender identity.

Proponents of this view thus contend that the sense of gender reversal is a form of psychosis. It is true that the patient, in attempting to gain acceptance from others in a new gender role, is asking others to assume a fiction if the anatomic and genetic sex is the base of observation. A person who considers changing his or her anatomic sex, anticipating acceptance and the reception of love and perhaps admiration, might be construed as having thoughts that are grandiose; those who tend to see the syndrome as a form of psychosis might see this patttern of thought as having qualities of delusion of grandeur. Furthermore, in transacting with their environment, the patients often perceive nonacceptance of their newly adopted gender role as hostile and rejecting; at times this behavior has paranoid overtones, though the patients do not exhibit persecutory ideation. If the above arguments are valid, the patient might be thought of as suffering from an ill-defined, chronic paranoid state.

It is repeatedly observed that the transsexual patient is usually able

to function well in areas other than the sense of gender identity. Although reality testing is intact, the judgment of transsexuals seems overwhelmed by the urge for change of gender as they begin dressing and living the life of the opposite sex. They risk constant involvement with the law. The transsexual who is not one of the antisocial group experiences severe anxiety over disclosure. Many of these patients state that they know their real sex, but feel a great relief when they dress and behave as members of the opposite sex.

If one views the feeling of gender reversal as a delusion, albeit an encapsulated one, one must consider the implications of being "delusional." The term "delusion" is usually used to denote feelings and thoughts that differ from the composite view perceived by others, commonly referred to as "reality." Here, is gender reality anatomic and genetic or is it the sum of psychological development? In this case, the discussion may center around the use of the semantics of the words "delusion" and "reality." In the present state of knowledge, the question is not an answerable one.

All transsexuals report depressive episodes of varying depths related to their problems of gender role. Their chief defensive operations are "suppression" of their anatomic gender role, in a conscious effort to control conflict; and "denial," partly conscious but chiefly unconscious. When these mechanisms fail, depression may be severe, and a searching estimate of degrees of depression, past and present, is essential in the evaluation. Some speculation as to suicide potential may then be made. A transsexual's occasional attempt at self-castration is probably his effort to rid himself of the physical evidence which most clearly defies his defenses and thereby provokes the depression. Surgery may bolster the defensive measures and substantially reduce the need for suppression and conscious denial; but less than perfect construction of a vagina, abnormal appearance of artificial labia and, to a lesser degree, inability to replicate menses may provoke rather severe depressive episodes in the postsurgical patient because of the vulnerability of the same defenses mentioned above.

The third criterion is evaluation of the patient's current socio-cultural status and consideration of the economic and vocational changes he must make in his living situation if he receives surgery. The transsexual cannot have accurate knowledge or feelings of the experience of living and being treated as a member of the opposite sex until he spends sufficient time living in that role; spending time in the opposite sex role lends a clearer idea of certain realities such as vocation, living situation, social opportunities, and even freedom of movement unescorted in public. Transsexual patients may undergo a severe socio-cultural crisis with high anxiety and depression after surgery. Present data indicate that the length of time spent by the patient in actual experience in the opposite sex role prior to surgery is of critical importance in our determining the extent of possible future crises.

The last judgment to be made in psychiatric evaluation is whether the patient is a candidate for psychotherapy rather than surgery. The adopted gender role is largely ego syntonic, and the patient is poorly motivated for any attempt to alter his or her firmly established opposite sex role. When psychotherapy is offered, it is nearly always refused by the patient unless it is an attempt to deal with problems other than gender role. Attempts at psychotherapy have been made, nearly always without success, in that the efforts seem to flounder over the fact that the patients feel threatened because they are asked to "abandon all hopes of a feeling of personal security, and then we might be able to do something" (Sullivan, 1953).

Other criteria for accepting a patient for surgery, such as physical appearance, age, legal commitments, and motivation for postoperative follow-up are also matters for general consideration by the Gender Identity Committee.

Early observations of transsexual patients indicate that their dealings with the surgeon are fraught with difficulty. They tolerate delays with extreme impatience and are apt to express a great deal of anger toward any delay in surgery. Moreover, their desire to be truly and completely female or male can lead to additional conflict with the surgeon. The possibility of their duplicating either sex in a perfect anatomical way is impossible, and how much less they may settle for is a matter of conjecture at this time. It has been reported that some patients have requested that ovarian implants be placed in the abdomen (Birker and Klages, 1961). Will we see more of such requests as the data on transsexuals accumulate?

Twenty or thirty years ago agreement to requests for alteration of anatomically assigned sexual role was impossible, and the patient's requests or hopes were "delusional" in the sense that reality provided no possible solution to such aspirations. Today such changes are being attempted as a possible solution to distress which has not been alleviated by traditional methods. Our criteria for selecting patients have been formulated within the guidelines of present knowledge. However, these *a priori* criteria must be considered tentative. Only postoperative evaluation of transsexuals can provide truly meaningful criteria for the future.

Summary

The criteria for selection of transsexual patients for sex reassignment that we are currently attempting to apply include: 1. Is the patient authentically motivated? 2. Is the patient psychotic? 3. Will the patient undergo sociocultural crisis if he receives the operation? 4. Is the patient a candidate for psychotherapy? These criteria are tentative until postoperative data on transsexuals become available. The nature of transsexualism is such that many patients are urgently demanding and manipulative, thereby creating special problems for the physician and his colleagues, especially when they form a collaborative committee.

CHAPTER 19

PSYCHIATRIC MANAGEMENT OF SPECIAL PROBLEMS IN TRANSSEXUALISM

Richard Green, M.D.

With the growing awareness by those who want to change their sex that the opportunity for realizing this aspiration is increasing, many more of these patients can be expected to contact psychiatrists as well as other physicians. Though the psychiatrist may not be affiliated with a medical program in which sex-reassignment surgery is being investigated, he can still be of considerable help to these persons.

Special problems exist in the management of those who want to change sex which are peculiar to the nature of the transsexual phenomenon, in addition to others in which general principles of psychiatric treatment apply. This psychiatrist makes no claim to know the best way in which to deal with the complexities of the patient who wants to change his sex. Though not engaged in a research program of sex-reassignment surgery, he has been consulted, because of his research interest in the development of masculinity and femininity, by thirty-five persons who were considering, actively planning for, or adjusting to already completed sex-reassignment surgery. Because of the varying time each patient was seen, ranging from one to 100 hours, and the inability of assessing the extent to which, as a group, they are a representative sample of the transsexual population, no attempt is made in the ensuing discussion to quantify the incidence of any of the special circumstances described. Rather, it is the purpose here to describe some difficult issues of psychiatric management of persons seeking sex change, issues which can be expected to arise during the course of contact with such patients. This discussion, based on limited experience, is by necessity of the newness and investigative nature of the study of transsexualism quite tentative. It is offered to acquaint other psychiatrists who may be called upon for help by these patients with preliminary guidelines regarding some of the issues which, in the writer's experience, may require attention.

Psychiatric management of persons seeking sex reassignment consists of exploration and understanding of the motivation for sex change, facilitating a realistic appreciation of the limits of available medical and surgical procedures, supporting the patient in the difficulties encountered in the social transition into a new gender role, management of possible emotional difficulties of the patient's family resulting from his decision for sex change, promoting a realistic anticipation of what the future may hold after sex reassignment, and, for those patients who undergo sex reassignment, assisting in the postoperative adjustment period.

The ensuing discussion, primarily describing the management of male patients, applies similarly to females.

Motivation for Sex Reassignment

The request for sex reassignment comes from patients other than transsexuals. It may be requested by persons considered to be primarily homosexuals or transvestites. The differential diagnosis of homosexuality, transvestism, and transsexualism is not always clear cut. However, as a guideline, the following distinctions are outlined, though they are, to some extent, over-simplifications. The theoretic basis on which differentiation is made takes into account gender identity and sexual object choice. Broadly stated, gender identity may be conceived as contrary to genital morphology in transsexualism and consistent with anatomy in transvestism and homosexuality. The male transsexual typically reports that he feels completely as a woman with the exception of his genitals, which are an anathema to him, and that he feels uncomfortable dressed as a man and relaxed dressed as a woman. Dressing in women's clothes is not sexually exciting to him in the sense of genitopelvic sexual excitement. If sexually attracted to males, he prefers not to conceive of this as a homosexual attraction. The nontranssexual and typical homosexual, though he may have some feminine identifications, primarily considers himself male and usually derives considerable pleasure from the use of his genitals. He readily acknowledges his homosexuality. The transvestite is typically heterosexual, and considers himself a male when dressed as a man, though to varying degrees he may consider himself to be a woman when dressed as one. Cross-dressing may be sexually exciting, thus taking on fetishistic qualities. In practice, these distinctions may be blurred so much that an unequivocal diagnosis is difficult. Also, there are patients whose past experiences seem consistent with either homosexuality or transvestism but who at the present time seem to fit more with the picture of transsexualism. It would require considerable space and detail to adequately cover all the issues of differential diagnosis. The subject has been dealt with extensively by Stoller (1968) and elsewhere in this volume by Pauly (Chapters 3 and 4) and Knorr, Wolf, and Meyer (Chapter 18).

The practical significance of these diagnostic distinctions lies in the extent of the patient's male identification and the pleasure derived from the

use of his penis. Intuitively, it would appear that the more masculine are a person's identifications, the more difficult would be the social and psychologic transition into living the role of a woman. And, the more sexually gratifying has been penile eroticism, the more significant its loss through surgical reconstruction involving amputation of the corpora and gonadectomy.

Assessing the patient's gender identity takes into account such factors as childhood behavior and fantasies, adult body imagery, masturbatory fantasies, and sexual and social relationships with other persons. Did the patient experience conflict over gender behavior as a child? To what extent? Have there been life periods in which he was able to adequately relate as a male? If so, how long ago and how successfully? What body imagery does the person have of himself? Can sexual arousal or gratification accompany imagery of himself with male genitalia? Has cross-dressing been sexually exciting? Does the person consider himself a man or a woman when dressed in masculine or feminine clothes? To what extent does the patient by his physical behavior convey an impression of femininity?

An intelligent, educated, 32-year-old salesman is an example of a person whose gender identifications are primarily masculine but who nevertheless was requesting sex change. He is tall, not effeminate in manner, and has never experienced the compulsion to dress as a woman. It is very difficult for him to simulate feminine behavior. Yet he requests surgery because of a compelling need to be loved and cared for by a male in a permanent union, a relationship he does not consider possible between two men. The issues this patient has been dealing with in psychotherapy include his need to be loved only by a male, the extent to which this is possible for him to achieve as a male, the ways in which he makes it more difficult for himself to achieve that goal, and the problems which might arise for him due to his masculine identifications were he to pursue a course of sex reassignment.

Eliminating Misconceptions about Medical and Surgical Procedures

Some patients have misconceptions about what surgery and hormones can do. Males should understand that estrogens alone will not remove their beard but that electrolysis is necessary. They should know that estrogens will not raise the pitch of their voice but that some vocal practice may help. Female patients should know that testosterone will lower the voice. Males should not expect a rapid transition into idealized female proportions from estrogens. The fact that many naturally born women exposed to the influence of estrogen since puberty have not achieved these dimensions is usually overlooked. Females should know that menses will stop with testosterone but that breast size will not appreciably diminish. They can expect some hirsutism, but acne may be an accompanying complication. Clitoral size will increase but a

protruberant phallus of penile dimensions will not develop. Libido will decrease on estrogen and may increase on testosterone.

With respect to surgery, males should know that cosmetic and functional results of genital surgery vary widely. Vaginal function especially is highly unpredictable in the present state of the technique of reconstruction. Some patients are plagued postoperatively by non-healing of suture lines and by vaginal stricture. Even with vaginal patency, the degree to which the canal is sexually pleasurable varies widely. The capacity for orgasm may be lost. Female transsexuals should know that construction of a penis is still in an essentially experimental stage. When attempted, multiple discomforting surgical procedures are required, with scarring at the donor sites of skin grafts. The cosmetic appearance and functional capacity of the phallus after multiple procedures is considerably less than what can be done to simulate female genital structures. Male and female patients will be sterile. Transplants of reproductive organs are not possible.

Social Transition into the New Gender Role

Some transsexuals hope to make the transition from life as a man to life as a woman in one abrupt step. They plan on living and working as a male up to the time of the conversion operation and then commencing life as a woman. While it may be possible for some patients to successfully follow this course, it is more prudent for the patient to experience a trial period living in the desired gender role prior to undertaking the irreversible surgical procedures, as suggested by Benjamin (1966). The male patient must be able to pass in society as a socially acceptable woman in appearance and to conduct the normal affairs of the day without arousing undue suspicion. An essential step in this direction is the lengthy and expensive process of electrolysis for the removal of facial hair. The change toward femininity resulting from electrolysis is dramatic. The thick makeup required to cover a dark beard makes the otherwise most feminine of cross-dressed transsexuals appear as a man in women's clothes. Electrolysis may well take a year and cost over a thousand dollars. A transsexual who had not yet undergone electrolysis was interviewed for the first time six months after undergoing surgical sex reassignment elsewhere. This patient was despondent over being suspected of being a male dressed in women's clothing. It was clear that the heavy makeup which barely covered the facial stubble was largely responsible for this disquieting impression.

Most male transsexuals, when first dressing publicly as women, greatly overdo it. Perhaps out of years of frustration at not being able to dress or use makeup, and perhaps from a partially distorted concept of femininity, they almost invariably overdress. The neophyte woman may appear in the consultation room, in mid-afternoon, dressed appropriately for a theatrical premiere.

Time is also required for the securing of civilian documents demanded

in everyday living, such as a driver's license and a social security card. Some legal risks will be taken. Publicly impersonating a woman is a criminal offense in some localities. In others, while cross-dressing is not an offense, persons have been arrested and charged with elastic offenses such as disturbing the peace or being a public nuisance. Reassurance to the patient can come from the psychiatrist supplying him with a letter to be carried stating the bearer is under medical and psychiatric treatment for transsexualism and transvestism. This is described as a medical syndrome which includes the compelling desire to dress in women's clothes. The letter should state further that the patient presents no threat to others. A final request can be made to direct any additional inquiry to the treating psychiatrist. Regardless of whether the letter is effective in dealing with police, it is carried as a talisman by the patient. The less frightened the person, the less likely is he to attract undue notice. Other risks will be taken; for example, securing a driver's license as a woman may entail falsification of a public document, though not necessarily so. (For a more extensive discussion of these legal issues, see Chapter 28 by Sherwin.)

Of considerable importance is demonstration of the ability to work and support oneself as a woman. The patient may have no means of supporting himself as a woman and have given no consideration to this issue. He may be unprepared for a job as a secretary, clerk, saleswoman, beautician, or waitress. The precipitous transition from a previously good salary, as in the case of a professional or semi-professional man, to an unskilled woman's salary level can pose another adjustment problem. To secure employment, there may be the need to invent a past and explain the lack of a previous work record and accompanying references. "I was married at 17 and am just divorced," is an alibi one patient used with success.

Persons undergoing sex reassignment while still enrolled in high school or college may request assistance from school authorities, so that enrollment in a new school can be undertaken in the new gender role. Consultation may be required with school administrators. While the writer has not had experience with such school age transsexuals, two of his psychiatric colleagues have and have been able to assist their patients in transferring educational credit and continuing their education. (Also, see Chapter 28 by Sherwin.)

The psychiatrist's advice that the patient gradually enter into the new gender role with a preparatory period of living and seeking employment as a woman is rendered less frustrating if, concurrently, some degree of somatic feminization is made available. Fortunately, such feminization under treatment with estrogens is reversible, giving the patient more time to consider his decision before it becomes irrevocable. The writer has made it a practice of referring the patient to an endocrinologist for management of hormone administration.

Two patients seen during the past year changed their minds about

pursuing a course of sex reassignment during the period of trial on hormones. One had been taking estrogens for over a year before being seen in psychiatric consultation. He was living as a woman evenings and on weekends and had a few thousand dollars saved for surgery. He then fell in love with a person who was herself a postoperative male transsexual. She loved the patient but insisted that in their relationship he behave as a male. Over a period of months he came to the decision that living as a male and marrying the person he loved (who had obtained a birth certificate change and so could marry as a woman) held more promise for his future than giving her up and pursuing his own course of sex reassignment. He stopped cross-dressing and taking estrogens and was sexually potent for the first time in his life. Six months after his marriage he reported he was the happiest he had ever been and had not experienced a return of his transsexual feelings.

The other patient was born with genital and spinal cord anomalies which prevented him from being sexually potent and forced him to continuously wear diapers. He left his wife and began taking estrogens in preparation for living as a woman. Two months after the separation he came to regard his quest for feminization as a retreat from the demands of masculinity. He returned to his wife in the hope of rebuilding his marriage. Psychodynamic implications of these cases aside, it should be pointed out that, while these patients are exceptions rather than the rule regarding the course usually followed after beginning a program of sex reassignment, they represent examples of where trial periods on estrogens and living as women provided time during which an alternative course of action came to be considered preferable.

Out of frustration, some patients are tempted to castrate themselves. Indeed, a few have attempted this, narrowly escaping death from hemorrhage. These patients think that if they institute castration, physicians will be forced to complete it. This is generally not the case. One patient seen recently, unable to find a sympathetic endocrinologist who would prescribe estrogens, swallowed large quantities of face cream in the hope of gaining some benefit from the hormone content. This same patient had injected an unsterile cosmetic directly into his breast. The ensuing enlargement was inflammatory in origin and the sepsis was nearly fatal. Another patient ran the legal risk of forging prescriptions for birth control pills. Such acts can be very self-destructive and must be discouraged.

The Use of Psychiatric Medications

One patient who was evaluated for ten sessions was clearly psychotic, being a paranoid schizophrenic, in addition to wanting to become a woman. Stelazine® 2 mg. t.i.d. resulted in control of paranoid symptoms, particularly his aggressive outbursts and feelings of persecution. The phenothiazine had no effect on his cross-gender orientation.

Another patient was suicidally depressed over his wish to be a

woman and his feelings of guilt at having left his wife and children to pursue this goal. In addition to twice weekly psychotherapy for several months aimed at assisting the patient in resolving the conflict, Tofranil® 25 mg. q.i.d. was given but no change was observed in the extent of the depression in association with administration or withdrawal of the antidepressant.

Two other patients with considerable anxiety were given Librium® 10 mg. q.i.d. with minimal improvement.

Most transsexuals report feeling calmer after they have begun taking estrogens. To what extent this is a placebo effect, a result of the chemical castration, or a specific effect of estrogen remains to be determined. Comparative tests with the new nonestrogenic antiandrogen, cyproterone, will help decide the issue.

Other Family Members

What the transsexual should tell other family members can be one of the more painful dilemmas in pursuing sex reassignment. Particularly when the patient is married and has children may the situation require delicate handling. Considerable supportive therapy may be necessary for wives of men going through the tortured decision-making and eventual preparation for reassignment. One wife condemned herself for having failed in her role as a woman. She benefitted from reassurance that her husband's gender-identity anomaly existed prior to their relationship and that it was highly unlikely that anything she could have done would have materially altered it. She needed to understand how pervasive and beyond simple will-power transsexualism can be. Other wives, if angry at their husbands, need to know that the marriage was not some sinister trick or fraud perpetrated on them, but that their spouse initially hoped the marriage would work. They need assistance with the initial shock of disclosure, the threat of being alone, and their feelings of inadequacy as females.

Truthful explanations to young children can be more confusing than helpful. The concept of sex change is bewildering enough for adults. Young children are better told that their parents are divorcing and that daddy will be living far away and probably unable to see them. They need assurance that he still loves them and that the separation is not their fault. At best, this will be difficult. At a later time they can be told the truth, if the mother wishes. Older children, early teenage and beyond, are in a better position to understand. They can hear the truth from their parents and additionally should have the opportunity to meet with the psychiatrist. Some of them may be able to cope with visits to the erstwhile father better than with total alienation.

Parents of the transsexual too may need help in assimilating the change. Parents may feel responsible and guilty for their son's behavioral anomaly. Regardless of one's idea of the role parents may play in the etiology of transsexualism, little will be gained by finger-pointing at this

stage. They need support and understanding of the pervasiveness of their son's gender identity conflict. The meeting with the psychiatrist is also a good time to pick up additional details of the patient's early years, in order to record and contrast them with what was previously reported by the patient alone. Observing the parents also furnishes an impression of the type of family setting in which the patient matured.

Anticipation of the Future

Emotional problems of the postoperative period need to be anticipated. Many transsexuals have led lonely, isolated lives prior to surgery. They optimistically look forward to reassignment as a rebirth. They may harbor unrealistic expectations of an immediately blissful life, exciting and romance-filled. They may profess the belief that they will very shortly meet the man of their dreams and settle into a happy family existence. They ignore the difficulties in this pursuit experienced by natural-born women with considerably greater preparation and experience. Unrealistic expectations can only lead to disappointment; tempering should take place prior to surgery.

One male transsexual, recently seen for the first time only after undergoing genital surgery and silicone breast augmentation, had come to Hollywood after reassignment with the dream of being a sensational topless dancer, and quickly finding a male who would love her as a woman. When neither fantasy materialized she became despondent and, in her own words, "became a whore." Disappointments such as these may be prevented by more adequate preoperative evaluation and treatment.

The patient may be living with a lover. He may be looking forward to the conversion operation with expectations of a post-surgical marriage. Aside from the legal difficulties involved, the transsexual may not take into full account the psychodynamics of the lover and prospective husband. It may be that after conversion the lover will lose interest in the converted partner. The presence of a penis on the preoperative transsexual, even if not utilized during sexual activity, may be important to the sustenance of the sexual and emotional gratification of the partner. A vagina, even though replacing a penis, may be too close to heterosexuality for these males. In the preoperative period, it is helpful to interview the prospective husband and make an appraisal of his sexual needs and the chances of the relationship surviving sex reassignment. It may be wise to prepare the transsexual for the possibility that the relationship may change.

An additional complication described by one male seeking sex reassignment was that his erotic attractions are only toward women. Males are not sexually stimulating to him. This patient's primary motive in seeking sex reassignment appeared to be a gender one; that is, he wished to lead the social life of a woman but not the sexual one. He found himself in the rare situation of anticipating a life of lesbianism after surgery.

CONCLUSION

The logical progression in phases of management outlined above does not indicate that each patient has been followed through these successive phases. Rather, patient contacts have been, for the most part, cross-sectional. Without the experiences of longitudinal observation, including postoperative follow-up, prediction of which patients seeking sex reassignment can be expected to be helped by such treatment is very difficult to determine. However, for this psychiatrist as for many psychiatrists who will see such patients, the issue as to whether he would recommend that a particular patient undergo surgical reassignment is largely academic. Typically the psychiatrist is not in a position to arrange surgery and many patients regardless of advice given them never give up until they obtain surgery.

It is unlikely that a psychiatrist can be sufficiently objective in his treatment of the person seeking sex reassignment if he has strong emotional feelings against reassignment and believes that under no circumstances may a person be helped by such procedures and that under no circumstances is it a legitimate course to follow. Nor can the psychiatrist be sufficiently objective if he feels reassignment should be freely granted to all who request it. Rather, a position of objective open-mindedness is preferable until more hard research data are available. This wait-and-see attitude, together with an interest in the development and manifestations of masculinity and femininity, plus a desire to assist another human being toward the resolution of a profound emotional conflict, can make the management of patients seeking sex reassignment a professionally enlightening experience.

SUMMARY

With the growing awareness by those who want to change their sex that the opportunity for realizing this aspiration is increasing, many more of these patients can be expected to contact psychiatrists.

Though the psychiatrist may not be working in collaboration with a research team in which sex-reassignment surgery is being performed, he can still be of considerable help to these persons.

Psychiatric management of persons seeking sex reassignment consists of exploration and understanding of the motivation for sex change, facilitating a realistic appreciation of the limits of available medical and surgical procedures, supporting the patient through the difficulties encountered in the social transition into a new gender role, management of possible emotional difficulties of the patient's family resulting from his desire for sex change, promoting a realistic anticipation of what the future may hold after sex reassignment, and, for those patients who undergo sex reassignment, assisting in the postoperative adjustment period.

CHAPTER 20

ENDOCRINE TREATMENT OF MALE AND FEMALE TRANSSEXUALISM

Christian Hamburger, M.D.

The aim of the endocrine treatment of male and female transsexualism is dual: suppression of the existing sexual characteristics and development and maintenance of the opposite gender's phenotype.

Suppression of the sexual characteristics can be obtained by surgical castration, but the effect is highly dependent on the age at which it is carried out. If the operation is done before puberty, the external sex organs remain infantile, and the secondary sexual characters do not develop. The closure of the epiphyseal growth zones is retarded and results in eunuchoid appearance with above normal body height and long extremities. The pigmentation of the skin is scanty and there is a tendency to obesity. The sexual libido is low and erections, ejaculations, or menses do not appear.

Ablation of the gonads in adult persons is not followed by marked changes of the phenotype. The metabolism may be diminished, but obesity develops only in a few percent of the cases. A serious complication is the appearance of "sex hormone withdrawal symptoms," well known from the female climacteric. The sexual libido diminishes but does not necessarily disappear completely. The growth of beard continues in castrated men, the voice does not change, and the effect on the growth of body hairs is usually not marked. The erective and ejaculatory powers decrease more or less gradually but do not always disappear completely. Ovariectomy is promptly followed by amenorrhea. While the effect on the size of the mammary glands is uncertain, a real involution of the tissue is seldom observed. Because the sex hormones possess anabolic effects on protein and calcium metabolism, osteoporosis is a frequent and serious complication of gonadectomy.

Long-term administration of male sex hormone to men and female sex hormones to women results in inactivation and, later on, in marked

atrophy of the sex glands. This condition is called "hormonal castration." Spermatogenesis and endogenous production of testis hormone are arrested. However, the suppression of the sex hormone is compensated, or usually overcompensated, by the exogenous hormone administration, and no inhibition of the secondary sex organs occurs. In women, the effects of continuous administration of female sex hormones will be confined to inhibition of ovulation and of menstruation.

Administration of sex hormones belonging to the other sex (heterologous or paradoxical hormone therapy) also results in "hormonal castration." This phenomenon was originally thought to be due to a sex hormone antagonism in the organism. However, Moore and Price (1932) in their classical publication proved that such sex hormone antagonism does not exist. The injuries to the gonads following administration of either sex hormone into either sex, were interpreted as the result of an inhibition of the activity of the hypophysis, that is, a suppression of what are now called gonadotropic hormones. Besides the hormonal castration, paradoxical sex hormone administration is accompanied by feminization in the male and masculinization in the female.

Chemistry and Metabolism of Sex Hormones

The sex hormones comprise the male hormone (testosterone) and two female hormones (estradiol and progesterone). Testosterone is produced in the male gonad; both female hormones are produced in the ovary. Testosterone is a virilizing hormone, responsible for the development and maintenance of the male sexual features, and estradiol and progesterone are feminizing hormones acting on the female sexual characters. This is the usual brief and clear-cut conception. It is, however, superficial and insufficient. It is important to realize that the sex hormones are certainly not sex specific. Testosterone is normally found in the female organism, and female sex hormones occur in men. Furthermore, the biosynthesis of sex hormones is not confined to the gonads, the adrenal cortex being an important source. The sex hormones share their masculinizing and feminizing effects with many other substances normally found in the organism, that is, precursors and metabolites of testosterone, estradiol, and progesterone.

All substances, whether precursors, hormones proper, or metabolites, that have the same biological actions as testosterone are called androgenic substances, those similar to estradiol are estrogenic substances, and progesterone-like substances are designated as gestagens, progestins, or progestational substances.

Chemically, the sex hormones and the adrenocortical hormones belong to the steroids. The mother substance in the organism is cholesterol, and the presence or absence of certain specific enzymes in the cells of the various organs determine what the end-result of a long

chain of metabolic conversions of cholesterol will be. The molecular structure of the steroid hormones, their precursors, and their metabolic breakdown products are known and they can be prepared synthetically. The pure compounds appear as white crystals. Most of them are insoluble in water but more or less soluble in oil and lipid solvents, such as ether and benzene.

Androgenic Substances

Testosterone (17β-hydroxy-androst-4-en-3-one) is produced by the Leydig cells in the interstitial testicular tissue. By means of new and highly sensitive analytical methods (isotope methods, gas chromatography), testosterone can be determined in the plasma of both sexes in minute amounts (in adult men: about 0.75 μg. per 100 ml.; in women: 0.04–0.10 μg. per 100 ml.). In women, the hormone is partly synthesized in cells in the hilus of the ovary, and an adrenocortical production is likely to occur in both sexes. A small fraction of testosterone is excreted as such in the urine, but the main part is converted to androsterone (3α-hydroxy-5α-androstan-17-one) which is an androgenic substance, and to etiocholanolone (3α-hydroxy-5β-androstan-17-one) which is hormonally inactive. Both of these metabolites are 17-ketosteroids, and they can be measured quantitatively by a rather simple chemical analysis (the Zimmermann reaction). The total amount of 17-ketosteroids originates from corticosteroids and from testosterone. In normal adult males about sixty percent of the 17-ketosteroids are adrenocortical metabolites, and in normal adult women most of the 17-ketosteroids are of adrenocortical origin. Following surgical castration, the 17-ketosteroid excretion decreases by about forty percent, that is, to the normal female level. A few milligrams of 17-ketosteroids are excreted per twenty-four hours in urine in children. The excretion increases during puberty and reaches a maximum at about twenty-five years in both sexes. Exogenous administration of testosterone is accompanied by an increased excretion of 17-ketosteroids. On the average, thirty percent of the intramuscularly applied testosterone is recovered as 17-ketosteroids.

Estrogenic Substances

One of the female sex hormones, 17β-estradiol (estra-1,3,5(10)-triene-3,17β-diol) is synthesized by the theca cells of the ovarian follicles. It circulates in minute amounts in the blood and is excreted in the urine partly unchanged and partly as the related metabolites estrone (3-hydroxy-estra-1,3,5 (10)-trien-17-one) and estriol (estra-1,3,5 (10)-triene-3,16α,17β-triol).

17β-estradiol and its metabolites are present in blood and urine of normal men, and estrone can be isolated from adrenocortical tissue.

Estrogenic substances are found in small quantities in urine from prepuberal children. The amount increases during puberty in either sex. In normal women the excretion (and the production) varies rhythmically in relation to the menstrual cycle. There are usually two peaks, the larger one at mid-cycle and the smaller one around the twenty-fourth day of the cycle. In the male the daily excretion is rather constant and does not decrease at advancing age. In post-menopausal women the excretion diminishes markedly and quite abruptly. With exogenous administration of estradiol, about twenty-five percent is recovered from the urine as estrogenic substances. When the activity of the gonads is stimulated by the administration of gonadotropic hormones, the urinary excretion of estrogens increases markedly in either sex. Testosterone is to some extent converted to, and excreted as, estrogens in normal men and women.

Progesterone

The other female sex hormone, progesterone (pregn-4-en-3,20-dione), is synthesized by the thecalutein cells of the corpus luteum. The hormone is also produced by the adrenal cortex and circulates in minute amounts in the blood of men and women. Progesterone is converted in the liver to pregnanediol (5β-pregnane-3α,20α-diol) and excreted as such in the urine. The urinary excretion of pregnanediol amounts to less than one milligram per day in normal men and in women during menstruation and in the follicular stage of the cycle. The excretion increases during the luteal stage of the cycle to three to ten milligrams per day on the average.

Gonadotropic Hormones

When the hypophysis is removed before puberty, the gonads remain infantile and secondary accessory sex organs are not developed. In the adult organism, hypophysectomy is accompanied by a rapid atrophy of the gonads and of the accessory organs, and the production of gonadal hormones is diminished. The effects of hypophysectomy can be repaired by hypophyseal transplantation or by injection of hypophyseal extracts. In immature animals, hypophyseal extracts induce precocious puberty by activation of the gonads: they contain gonad-stimulating or gonadotropic hormones (gonadotropins).

Gonadotropins can be extracted from hypophyses of animals and human beings. Although the biochemists have not yet succeeded in preparing completely pure gonadotropins, we know that these are polypeptides and their amino-acid composition is not far from being deciphered. Numerous biological experiments and, in particular, recent physicochemical investigations have shown that there are two distinct gonadotropic hormones in the extracts of the anterior lobe of the

hypophysis. One of them stimulates the development of the ovarian follicles and the tubular epithelium of the testis. It is called the follicle stimulating hormone (FSH). The other hormone stimulates the formation of corpora lutea in the ovary and the interstitial tissue with the Leydig cells in the testis. It is designated either luteinizing hormone (LH) or the interstitial cell stimulating hormone (ICSH).

The gonadotropic hormones are excreted in the urine. The excretion is insignificant before puberty. In the adult woman in the menstruating age, the excretion varies cyclically, and usually there is a peak of the LH excretion at the fourteenth to sixteenth day of the cycle at the time of ovulation. After the menopause, gonadotropin production and excretion increase rapidly. In males the excretion increases gradually from the age of forty years, but it does not reach the same high values as in aging and old women.

Regulation of the Sex Hormone Production

The biosynthesis of estradiol and progesterone in the ovaries and of testosterone in the Leydig cells is stimulated by the gonadotropic hormones. On the other hand, the sex hormones inhibit the release of gonadotropins from the hypophysis (negative feedback mechanism). A marked decrease of the sex hormones, for example, caused by ovariectomy or orchidectomy, is followed by an increased production of gonadotropins. In this automatic regulation, the central nervous system is involved.

The hypophysis is connected through the hypophyseal stalk with hypothalamic nerve centers on the base of the brain. Furthermore, there is a vascular connection in the stalk between hypophysis and brain through a special portal vessel system. So-called "neurosecretory material" has been found in the hypothalamic centers, and special "neurohormones" have been isolated from these centers. Numerous experiments involving transsection of the hypophyseal stalk, electrolytic destruction of hypothalamic centers, and local application of sex hormones in the hypothalamus have shown that there is a hypothalamic secretion of substances (polypeptides) that stimulate the release of hormones from the anterior lobe of the hypophysis, the gonadotropic hormones. These substances are called "releasing factors." Thus there are three links in the regulatory mechanism: FSH- and LH(ICSH)-releasing factors induce the release of both gonadotropins; these stimulate the secretion of sex hormones in the gonads; and the sex hormones inhibit the secretion of hypothalamic "releasing factors."

The negative feedback effect is common for the sex hormones, but their activity differs markedly per weight unit. Estradiol is most active, testosterone must be given in rather large quantities, and the effect of progesterone is variable, depending on the mode of administration, on the size of the doses, and on the time. Many details in the regulatory

mechanism need further clarification, but in broad outline this hypothalamo-hypophyseal-gonadal interaction explains the supposed antagonism between the male and female sex hormones. In the male organism, estradiol inhibits the release of gonadotropins resulting in testicular atrophy; in the female organism, testosterone has the same effect upon gonadotropin release, and atrophic changes in the ovaries appear. These facts are basic to the endocrine treatment of transsexualism.

Biological Effects of Sex Hormones

The gonadotropic hormones have a primary effect on the gonads. FSH stimulates the growth of the ovarian follicles, and LH the transformation of the ripe follicles into corpora lutea. Ovulation is probably induced by a sudden increase of LH secretion. FSH stimulates the spermatogenic tubules, and LH (ICSH) the Leydig cells in the interstitial tissue. This applies to animal experiments; in man, the gonadotropic regulation of the testicular functions may be more intricate.

In connection with structural changes in the gonads, the gonadotropins stimulate the biosynthesis of the gonadal hormones, and all the many extragonadal effects of the gonadotropins are caused by the sex hormones.

Effects of Female Sex Hormones in Women

Estrogenic hormones stimulate the female accessory sex organs such as salpinges, uterus, vagina, and mammary glands. They act on hypothalamic functions and on the metabolism of proteins, calcium, and water, and probably also on hair growth and the skin.

The effects of progesterone are closely linked up with the actions of estradiol, and these hormones act in many respects synergistically. Estradiol and progesterone regulate the menstruation processes. Under the influence of estradiol, the endometrium comes to the proliferative stage until the time of ovulation. Then secretory changes appear in the endometrium as the progesterone production increases. When the amount of progesterone decreases subsequent to degenerative changes in the corpus luteum, the superficial layers of the endometrium break down and are removed during the bleeding. Both hormones act on the cervical mucus: estradiol makes it liquid and translucent, progesterone increases its viscosity. The vaginal epithelium changes cyclically concurrently with the variations in estradiol and progesterone secretion. In the mammary glands, estradiol acts primarily on the duct system and progesterone on the alveolar growth.

Increased endogenous production of estrogens in girls before puberty results in precocious puberty with menstrual bleedings, development of mammary glands and of pubic hair. In women past the climacteric,

cyclical treatment with estrogens and gestagens is accompanied by withdrawal bleedings of normal menstrual character.

Effects of Female Sex Hormones in Men

Increased endogenous formation of estrogens in the male organism (by estrogen-producing tumors of the testis or adrenal cortex) or exogenous administration of estrogens elicits dramatic changes. At the center of these changes is primary gonadotropin inhibition with secondary testis atrophy and inactivation.

Added to these "negative" testosterone-withdrawal symptoms are the specific effects of estrogens on the rudimentary female sex structures. Gynecomastia develops gradually, and the breasts can increase to the size normally found in a girl in her late teens. The nipple and areola grow and get pigmented. The connective tissues in prostate and seminal vesicles increase, and certain embryologic female elements in the prostate (for example, the utriculus) show hyperplastic or metaplastic epithelial transformations. These changes in the accessory sex organs do not usually give clinical symptoms. The general metabolic effects are the same as in women. By long-continued estrogen influence, the distribution of subcutaneous fat can be changed in a feminine direction and the muscular strength diminishes. The influence of estrogens on the hair growth is extremely complex. The growth of beard rarely decreases, and usually the other masculine hairiness (chest, linea alba, etc.) can remain unchanged or diminish gradually. The growth of hair on the scalp seems to be stimulated by estrogens. In men with high temples new growth of hair has been observed in the bald triangle. Larynx, vocal cords, and the voice are not changed in the adult male. It is hardly possible to state whether or not estrogens have specific psychic effects in men. The whole situation is complicated, and it is impossible to untangle what is due to testosterone deficit (hormonal castration), what to the somatic feminization, and what to psychosocial reactions.

Progesterone has only slight effects in the male organism. The body temperature increases slightly, and drowsiness has been observed following high dosage (some steroids possess an anaesthetic effect). It has been maintained that long-term administration of progesterone can give irreversible arrest of spermatogenesis, and also that progesterone can increase the sexual potency. However, these observations need confirmation.

Effects of Testosterone in Men

In a normally developed adult man with a normal production of male hormone, a surplus of testosterone can hardly have any effects on the accessory sex organs and characters. If sufficient doses of testosterone are given continuously for some months, the number of sperms decreases

and complete aspermia can occur. The mechanism of this process is still obscure. Hypothalamic dysfunction with an abnormal ratio of FSH to LH may play a part, or estradiol formed by enzymatic conversion of testosterone could influence the spermatogenesis. Before puberty and in adult men with certain syndromes of hypogenitalism, the virilizing effects of testosterone are marked.

Effects of Testosterone in Women

The effects of androgens in women are well known both from observations in cases of increased endogenous production and from exogenous administration. In congenital adrenocortical hyperplasia, the abnormal androgen production sets in early in the fetal life and results in various degrees of masculinization of the genital organs. There is a marked masculine hairiness, menstruation does not occur, and the mammary glands remain undeveloped. In cases of androgen-producing adrenocortical tumors in adult women, menstruation is suppressed and virilizing symptoms appear, such as masculine hairiness, deep voice, acne, baldness, hypertrophy of the clitoris, and a change in intensity of the sexual libido, in some instances with a homosexual direction. Similar virilizing symptoms are known as side effects of testosterone administration to women with menopausal disturbances or with metastases after mammary carcinoma.

Preparations and Modes of Administration

Androgens

The naturally occurring male sex hormone, testosterone, can be given intramuscularly in oily solution. It is, however, readily absorbed and eliminated. The absorption and elimination can be retarded by combining testosterone with various fatty acids, for example, propionic acid and isobutyric acid. These esters can be injected with longer intervals than the free testosterone. There is some proportionality between the length of the fatty acid side chain and the duration of action. Testosterone enanthate has been claimed to be effective for about four weeks after a single intramuscular injection in oily solution. However, by determinations of 17-ketosteroids in the urine, it can be demonstrated that most of the preparation is excreted in the course of the first week. Testosterone and its esters can be applied in solid form either as intramuscularly implanted tablets or as intramuscular injection of microcrystals suspended in an aqueous medium. From the surface of the tablets or crystals there is a slow absorption, and if sufficient amounts of testosterone isobutyrate crystals are given, increased content of 17-ketosteroids can be found in the urine up to fifteen days after the injection.

Oral administration of testosterone and its esters is out of the question,

because the hormone is inactivated in the liver after absorption from the small intestine to the portal vessels. An artificial synthetic compound 17α-methyltestosterone is orally active, but in some patients it has side effects such as nausea or even jaundice due to damage of the liver.

Free testosterone is readily absorbed by the rectal mucosa in the region of the inferior hemorrhoidal vein plexus. In this way varying amounts of the hormone do not have to pass the liver and thus escape inactivation. Testosterone can therefore be administered in the form of rectally applied suppositories (Hamburger, 1964). The base of modern suppositories is neutral glycerine esters of saturated fatty acids, and they are devoid of local irritation. When testosterone suppositories are applied for eight hours (preferably overnight), the absorption is maximal.

Estrogens

The naturally occurring 17β-estradiol and estrone, given exogenously, are active by the oral route of administration. Estradiol monobenzoate is soluble in oil, and if injected intramuscularly twice a week, a satisfactory clinical effect is obtained. Estradiol esters can be injected as microcrystals in aqueous suspension with a markedly prolonged action (one month or more). Numerous artificial compounds with estrogenic activity have been synthesized for oral administration. Widely used is diethylstilbestrol (trans-3,4-bis(4-hydroxyphenyl)hexane-3), a compound that does not belong to the steroids. Closely related substances are dienestrol (3,4-bis(4-hydroxyphenyl)-hexadiene-2,4) and hexestrol (3,4-bis(hydroxyphenyl)hexane). 17α-ethinylestradiol is highly active by oral administration, but like the stilbestrol preparations it is not free from side effects (nausea). Mestranol (17α-ethinylestradiol-3-methyl-ether) is the estrogenic component of many of the orally active contraceptive steroids.

Estrogenic hormones are absorbed through the skin when applied in ointments or alcoholic solutions. Local application on the skin over the mammary glands has in some instances induced the growth of the glands (experiments with unilateral application).

Estradiol is absorbed by the rectal mucosa, and administration of the hormone in the form of suppositories may have some advantages in particular in combination with progesterone (see below).

Gestagens

Naturally occurring progesterone is insoluble in water. Oily solutions can be prepared with maximally 25 mg. per ml. When given intramuscularly large quantities of oil must be injected, and there is a risk of producing oil cysts. Furthermore, the hormone is absorbed and eliminated rapidly, and frequent injections are necessary. Long-acting esters cannot be prepared, because progesterone is a diketone (it

has no HO-groups). Progesterone can be administered as microcrystals in aqueous suspensions. The absorption from the crystals is, however, only slightly delayed as compared to oil solutions, and pains, reddening, and infiltrations on the site of injection are often unpleasant complications to this form of administration. Human tissues do not tolerate progesterone in solid state, and tablet implantations had to be given up because the tablets were often extruded. Oral administration of progesterone is only moderately effective, and the best mode of application of genuine progesterone is the rectal administration of suppositories.

In order to obtain orally active gestagens, pharmaceutical laboratories have synthesized numerous steroid compounds. Many of them have high progestational effects when given as tablets, but quite a lot of them have also estrogenic or androgenic properties. In contradistinction to genuine progesterone, most of the artificial gestagens have side effects (nausea, etc.).

17α-hydroxyprogesterone caproate has a rather long-lasting effect when injected intramuscularly in oily solution, but in accordance with the fact that it is an ester of 17α-hydroxyprogesterone, which is a precursor of testosterone, it has androgenic properties.

Hormonal Treatment of Transsexuals

Male Patients

The treatment consists almost exclusively in the administration of estrogenic preparations in doses sufficient to induce hormonal castration and feminization. In view of the fact that it is a long-term or life-long treatment, it is important to use the most lenient mode of administration. Intramuscular injections can be avoided or may be confined to the initial stages of the treatment, and oral administration ought to be the method of choice. It is recommended to try preparations of the diethylstilbestrol type or 17α-ethinylestradiol at first and continue, if they are tolerated well. Should the patients be nauseated or complain of other side effects, tablets containing genuine estrogens (for example, estrone) should be tried, and there are quite a lot of such preparations on the market. The possibility of giving sufficient amounts of estradiol in the form of suppositories should also be considered. In the long run it may be safer to use "Nature's own hormones" (for example, 17β-estradiol or estrone) than artificial compounds.

As to the dosage of estrogens, it is hardly possible to generalize. There is, however, no doubt that the time factor is of the greatest importance. Demasculinization and feminization cannot be precipitated by giving excessively high doses. The estrogenic hormones stimulate cell divisions in specific hormone-sensitive tissues, but millions and millions of cell divisions must have taken place, before the growth of the tissue is visible. As emphasized by Benjamin (1966), unphysiologically high doses

should be avoided, because they can disturb the interactions of endocrine glands. It is known from animal experiments that estrogens can inhibit the secretion of growth hormone by the hypophysis, and it is likely that thyroid and adrenocortical functions may also be affected.

An objective measure of gonadotropin inhibition can be obtained by following the daily excretion of 17-ketosteroids. Hamburger and Sprechler (1951) determined the twenty-four-hour excretion of 17-ketosteroids and reducing corticosteroids for half a year during estrogen administration to a twenty-four-year-old male transsexual. One hundred eighty-five specimens of twenty-four-hour urines were examined for 17-ketosteroids. Estradiol monobenzoate in oily solution was given intramuscularly and ethinylestradiol tablets orally. Treatment and results are shown in Figure 1.

It is apparent that inhibition of testosterone secretion begins immediately after an intramuscular injection. The 17-ketosteroids were depressed to the castrate level already on the day following the injection. Subnormal values were found for altogether twelve days. Ten injections of estradiol monobenzoate (5 mg. each) given over eleven days depressed the 17-ketosteroids for about twenty-six days. By long-term oral administration of ethinylestradiol it was found that a daily dose of 100–200μg. inhibited the 17-ketosteroids to the castrate level, and that as small a dose as 50 μg. per day was sufficient to maintain the low value. By discontinuation of the estrogen administration, at a time when the hormonal castration had been maintained for about half a year, the 17-ketosteroids remained at a low level for eight days and increased gradually, reaching the pretreatment level on the twenty-sixth day after the last hormone administration. Figure 1 also shows that the estrogens had no effect on the excretion of corticosteroids. In other words, the gonadotropin secretion was inhibited, but the corticotropin secretion was not.

During the periods of decreased 17-ketosteroid excretion, the testes diminished in size and were soft and flabby. The erective power and sexual libido were also markedly impaired. Increased pigmentation of the nipples and of the skin in the genital region occurred towards the end of the treatment, together with some gynecomastia. No untoward effects were noticed. After discontinuation of the estrogen administration, the size and consistency of the testes returned to normal in the course of three to four weeks, and erections and ejaculations reappeared.

Usually there is no reason to carry out such hormone analyses in order to find the suitable dosage. It should be sufficient to follow the progressive demasculinization and feminization clinically. As a rough approximation and general guidance for the dosage, it may be permissible to set forth this statement: Irrespective of preparation and mode of administration, the daily dose of estrogen should not be much different from that recommended on the label for treatment of menopausal

disturbances or amenorrhea; initially somewhat higher doses, and when the desired effects are apparent, somewhat lower doses.

Benjamin (1966) recommends combining estrogen treatment with progesterone or various synthetic gestagens. It is likely that such combined therapy will favor the induction of gynecomastia, as both hormones are necessary for the normal harmonious development of the mammary glands.

It is strongly recommended that the estrogen-induced castration should always be maintained for at least half a year in connection with careful somatic and psychiatric observations, before surgical castration and other irreversible interventions are carried out.

The attempts at feminization have better chances of being successful in patients having a neutral or not pronounced masculine appearance. If the patient presents a black and vigorous growth of beard, deep voice, excessive hairiness on trunk and limbs, strong muscles and prominent veins, it is very unlikely that the estrogen treatment will give a harmonious result. In such extreme cases it may possibly be wise to try to persuade the patient to abstain from any endocrine treatment unless the psychologic disposition makes such persuasion out of the question.

Female Patients

As mentioned before, the inhibitory effect of testosterone on the gonadotropin secretion is weaker than that of estrogens, and in order to induce defeminization massive doses of testosterone preparations must be given. As to the induction of virilization, the sensitivity varies individually. Some normal women, in particular the dark type, are very sensitive to testosterone, and less than 100 milligrams per month can induce growth of facial hairs and deepening of the voice. By long-term administration a marked hypertrichosis can appear, the skeletal muscles develop, and the clitoris often increases markedly in size and appears as a small hypospadiac penis.

The defeminizing effects of androgens are confined to two organs, the ovaries and the mammary glands. One could expect some regression of the breasts, and it may happen in a few cases, but all investigators agree that the effect of even large doses of testosterone is so uncertain that plastic surgery to decrease the size of the breasts is almost always, if not always, necessary.

The androgen-induced suppression of the ovaries will result in diminished or completely suppressed secretion of estradiol and progesterone, and the clinical manifestation will be the cessation of menstruation. As to the ability of testosterone preparations to induce amenorrhea, there seem to be somewhat divergent experiences. Benjamin (1966) maintains that weekly injections of 100 to 150 mg. of a long-acting testosterone ester usually stops menstruation, and that the amenorrhea can be preserved by monthly injections of 150 to 200 mg.

He emphasizes great individual differences, however. Vogt (1968) found that 250 mg. of testosterone enanthate injected every fortnight could not maintain amenorrhea consistently; in three of his five cases the ovarian function had to be suppressed by X-ray treatments and one of his patients was surgically castrated.

As to the choice of preparation and the mode of administration, it is unanimously agreed that the orally active 17α-methyltestosterone should not be used. The amounts of the preparation required to obtain the desired effects would have to be so large that the therapy would be dangerous to the liver. Intramuscular injections of aqueous suspensions of testosterone isobutyrate crystals have been used, but most investigators prefer oily solutions of long-acting testosterone esters. The solubility of these compounds is so high in oil that only small quantities of oil solutions need to be injected. The intramuscular injections are of course not very troublesome, but they can be avoided completely by the administration of suppositories containing free testosterone (50, 100, or 200 mg. per suppository to be applied overnight). This mode of application has so many advantages that it deserves large-scale trial. The preliminary experience by Vogt (1968) and by the author (unpublished) is promising.

Some untoward effects of the long-term androgen therapy should be mentioned, namely, attacks of acne and increase of the sexual libido. In some instances, the acnosis is transitory and usually it is moderate and need only local treatment. The libido increase (probably associated with enlargement of the clitoris) may be construed as undersirable and may be so troublesome that the androgen treatment must be discontinued. Benjamin (1966) has made the interesting observation that small doses of progesterone added to the testosterone can occasionally counteract the increase of libido.

The endocrine treatment of transsexual women has in a few instances been supplemented by plastic surgery on the external genital organs, but achievement of cosmetically and functionally adequate results has to date been limited.

Summary

The aim of the endocrine treatment of transsexual patients in either sex is dual: suppression of the existing sexual features (hormonal castration) and development and maintenance of sexual features belonging to the other sex "paradoxical hormone therapy." The sex hormones proper are steroids (testosterone, estradiol and progesterone) and together with many of their precursors and metabolites are divided into three groups: androgens, estrogens and gestagens. The sex hormones are not strictly sex specific.

Male and female sex hormones are normally found in both sexes, and their production is not limited to the sex glands. The gonadotropic

hormones are proteins and not sex specific; they stimulate the development and function of testes and ovaries. The complicated interaction between hypothalamic brain centers, the hypophysis, and the sex glands constitutes the physiological background for the hormonal treatment of transsexualism. With very few exceptions, the sex hormones used therapeutically are synthetic compounds; some of them are identical with the naturally occurring hormones, but most of them deviate chemically more or less from the natural hormones. The preparations can be administered orally in the form of tablets or linguets, intramuscularly in oily solution, or as aqueous suspensions of microcrystals, and rectally in the form of suppositories.

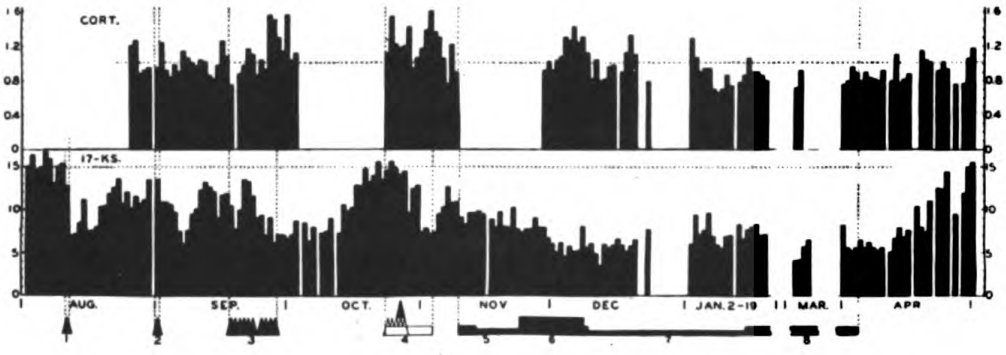

FIGURE 1. Urinary excretion (mg./24hr) of corticosteroids (CORT.) and 17-ketosteroids (17-KS.) in a twenty-four-year-old male transsexual during administration of estrogens:

1) Intramuscular injection of 15 mg. estradiol monobenzoate.
2) Intramuscular injection of 15 mg. estradiol monobenzoate.
3) Daily intramuscular injection of 5 mg. estradiol monobenzoate.
4) 300 mg. pregnenolone daily orally + 100 mg. intramuscularly for the first five days; the black wedge indicates the injection of 15 mg. estradiol monobenzoate.
5) Oral administration of 17α-ethinylestradiol, 0.10 and 0.06 mg. per day.
6) Oral administration of 17α-ethinylestradiol, 0.20 mg. per day.
7) Oral administration of 17α-ethinylestradiol, 0.05 mg. per day.
8) Oral administration of 17α-ethinylestradiol, 0.01 mg. per day, from January 15th to April 4th, 1951.

APPENDIX TO CHAPTER 20

For the Practicing Physician: Suggestions and Guidelines For the Management of Transsexuals

Harry Benjamin, M.D.

As a matter of principle, I feel that it is always wise to point out to the male transsexual how much trouble, how many risks, and how many difficulties he will save for himself if he succeeds in accepting himself in the role of his anatomical sex, possibly with the help of some form of psychotherapy, and/or hormonal treatment. In this way he would avoid an expensive major operation, with the results always being uncertain. The same applies analogously to the female transsexual.

Such advice, however, is rarely accepted by the patient, and surgical sex reassignment is insisted upon. Endocrine therapy would then be the immediate method of choice in order to provide emotional relief and gain time for more mature consideration.

Endocrine Treatment of Male Transsexuals

Many patients can be physically feminized and sufficiently benefited in their emotional life by oral medication only. According to my clinical experience, one tablet of Estinyl® (ethinyl estradiol) 0.5 mg. daily after meals may be used to begin with. Alternatively, Estinyl® 0.05 mg. three times a day after meals may be used, with one Provera® (medroxyprogesterone acetate) 10 mg. daily, or, if weight increase is desired, one or two Enovid® (norethynodril with mestranol) 10 mg. daily. Modification with other doses or steroids may be made according to response, judged after four to six weeks. Diethylstilbestrol (enseals) in the dosage suitable for transsexual feminization could, according to recent observations on aging men with cancer of the prostate, endanger the cardiovascular system through water retention. A salt-poor diet or an occasional diuretic may, therefore, be advisable under all prolonged steroid medication.

If synthetic estrogens are not tolerated, one to two Premarin® (conjugated estrogens—equine) tablets, 2.5 mg. each, daily, could be substituted, possibly with one Provera® 10 mg. or one Enovid® 10 mg. added daily or on alternating days.

If the patient is cooperative, an interruption of all endocrine treatment for two to three weeks every two to three months may be a beneficial precaution against undesired side-effects. The use of very large doses should be discouraged, as they may suppress pituitary function and have the opposite effect of the desired one (breast development).

If injections are required for psychological reasons or for lack of response to oral medication alone, a preparation like Delestrogen® (estradiol valerate) 30 to 40 mg. mixed with Delalutin® (hydroxyprogesterone caproate) 30 to 60 mg. or a similar progesterone is suggested every two weeks. Oral medication, as above or in reduced amounts, can be given at the same time. After fifteen to twenty injections, it may be well to discontinue injections and to maintain the patient on tablets only for about six months.

After a sex-reassignment operation, oral estrogen medication should be continued, to prevent castration symptoms, and to aid further feminization. Approximately one half or even less of the preoperative dose may be found sufficient, and occasional interruptions may be tried.

Liver function tests are recommended before estrogen therapy is started, especially if there is a history of hepatitis. Tests would best be repeated from time to time according to the intensity of the treatment. In addition to liver dysfunction, a history of thrombophlebitis, pulmonary embolism, or malignancy would be generally a contraindication to treatment or at least require a greatly reduced dosage.

Individualization is required. Schedules as above-described have given good results, but further research through clinical observation with different estrogen preparations and dosages is to be encouraged.[1]

[1] On the basis of a conservative theoretical position, namely that the hormonal treatment of the male transsexual should be as close as possible to that employed in standard replacement therapy, Dr. Claude Migeon prefers low dosages of both estrogenic and progestinic drugs. Thus, a possible combination therapy would be: diethylstilbestrol (enseals) 0.5 or 1.0 mg. twice daily plus Provera® 2.5 or 5 mg. twice daily. In place of diethylstilbestrol, Estinyl® 0.05 or 0.1 mg. twice daily might be substituted, or Premarin® 0.625 or 1.25 mg. twice daily. Before gonadectomy, the treatment would be every day for a minimum of four to eight months. Following surgery, treatment would be cyclic, for the first three weeks of each month, missing the fourth week.

An alternative to the foregoing combination of estrogen plus progestin taken separately would be a commercial product combining the two, for example, Enovid E® (norethynodrel 2.5 mg. and mestranol 0.15 mg.) or, in a larger dose, Enovid E® (norethynodrel 9.85 mg. and mestranol 0.15 mg.) one tablet a day for the first three weeks of each month.

If the patient prefers not to accommodate to a daily oral therapy, but to an intramuscular one instead, then the following could be prescribed: Delestrogen® (estradiol valerate) 10–20 mg. plus Depo-Provera® (medroxyprogesterone acetate) 50–100 mg. every two weeks. Instead of Delestrogen®, Depo-®estradiol

Endocrine Treatment of Female Transsexuals

In treating the female transsexual,[2] similar suggestions are to be made regarding surgical procedures as in the male. Before the surgery, androgen by injection is usually required in sufficiently large doses to suppress menstruation, to encourage some hair growth on face and body, possibly to lower the voice, and to accomplish a slight shrinkage of breast tissue. These changes can improve greatly the emotional state of the patient.

The dosage of androgen is subject to great individual differences; for instance, a weekly intramuscular injection of 200 of 250 mg. Delatestryl® (testosterone enanthate) may be necessary in the beginning, but can be reduced after menstruation has ceased.

It is wise to warn the patient that androgen treatment could produce temporary acne, as well as edema.

I have found oral androgen medication, including methyl testosterone, mostly unsatisfactory except for maintenance after a total hysterectomy and mastectomy. Buccal Oreton® propionate (testosterone propionate) or a similar preparation is to be preferred to methyl testosterone.

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cypionate 2–5 mg. every two weeks might be substituted. After four to eight months of biweekly parenteral therapy, the same dosages could be given once every four weeks.

If in the preoperative state, the above dosages prove insufficiently effective after four to six weeks, then Dr. Migeon recommends that the dosage could be doubled or tripled. Otherwise, the rule is to use the smallest dosage that will give the desired clinical results.

[2] See also Chapter 26 by Randell.

CHAPTER 21

FACIAL HAIR: PERMANENT EPILATION WITH RESPECT TO THE MALE TRANSSEXUAL

Morton B. Finifter[1]

Among male transsexuals as a group, body hair after puberty is found in the same range of masculine variation as one would find in any group of males: some are very hirsute, some moderately so, and a few only lightly covered with body and facial hair. Some grow a heavy beard early in adolescence, others become bearded much later. As far as is known, the variation is dependent on genetic stock rather than on differences in male hormone production or on any factor connected with the syndrome of transsexualism itself.

Theoretically, it is possible to prevent the development of a masculine hair distribution in a transsexual male by early suppression of androgenic function. The traditional method of preventing adolescent masculinization is by prepubertal castration. So radical and irreversible a method as surgical castration will probably never be applied to transsexuals, despite the prepubertal onset of the disorder, since absolute certainty of diagnosis in a child is not presently possible. Functional, or pharmacologic castration, which is reversible, is more feasible. In the future, it might be possible to use a new drug, the nonfeminizing antiandrogen (cyproterone acetate, not yet released for human trial use), for this purpose. Presently, the only available method of functional castration is by means of androgen-suppressing sex hormones, namely estrogen or one of the synthetic progestins, for example, Provera®.

A few teenage transsexuals have a history of having obtained estrogen early enough in their adolescence to prevent development of the beard and other masculine body hair. For the most part, however, the transsexual candidate for sex reassignment is already hirsute, and demands "something to be done about it." He is in the same position as

[1] My thanks to Dr. John Money for his interest and his provision of personal observation and heretofore unpublished data concerning the male transsexual.

a normal woman who suffers the emotional burden and social stigma of facial hypertricosis, or the woman who, despite normal hormonal function, has an unsightly amount of hair on the forearms, legs, thighs, or sternum.

Once the male transsexual develops masculine hair growth, he can expect only partial relief from androgen suppression secondary to female-hormone treatment and/or surgical castration. Over a period of years, the hair on the limbs and torso will become thinner, more silky, and perhaps lighter in color. The face and the head, however, are a different matter. If masculine balding has taken place, there may be some, but incomplete, regrowth of scalp hair. The beard will usually become more sparse, softer in texture, and slower growing; but it will never totally disappear from the mandibular, the inferior and superior labial, the zygomatic, and the parotid regions as a result of estrogen therapy (Flesch, 1954, quoting Juster).

Obviously, to insure the most complete feminization, the beard must be removed completely and permanently. Usage of chemical depilatories, epilating wax (violent mass epilation), tweezers, and pumice rubbing are merely temporary measures. They may inflict severe damage to the epidermis by promoting chemical burns, infection and distorted follicles (Flesch, 1954; Finifter, unpublished data). Shaving, a daily masculine ritual, needless to say, would hardly lend itself to the basic aim of the transformation. Electrolysis, to facilitate a permanent removal (Van Scott and Ekel, 1958) should normally be employed.

The term "electrolysis" is used in the broad sense to denote an electrical-source procedure, either of the older galvanic type or the newer high-speed electrodesiccation. However, basic galvanic energy may prove extremely slow in removing the beard, inasmuch as hair shafts are heavy, deep-seated, and in a percentage of instances, distorted in growth structure (Finifter, unpublished data). Possibility of galvanic scarification is ever present, especially in treating the caliber of shafts as described, due to prolonged and repeated placement of the galvanic probe. By contrast, the recent high-speed technique removes permanently the beard and allows the epidermis to remain intact, blemish-free, and pleasing to the eye and touch. It is accomplished by employing electronically controlled high-speed electrodesiccation on an E-Pulsiccator (Finifter, unpublished data). This procedure introduces a fine probe, platinum or steel, 0.002 to 0.005 inch in diameter, $\frac{3}{16}$ inch in length, to the dermal papillae of the individual hair shaft. The proper intradermal ratio (T/I/R) represents:

T—Time range of exposure ($\frac{1}{10}$ to $\frac{1}{1000}$ second), electronic pulse rate
I—Intensity of output (arbitrary)
R—Resistance of tissue (Rothman, 1954)

This ratio is determined for each individual at the initial procedure. Upon determination of the optimum ratio values, desiccation of papillae may proceed rapidly in the hands of an expert. Depth of papillae, thickness of hair shafts and distortion of follicle must be evaluated and may necessitate revision of the ratio. Due to the rapidity of probe insertions and consequent extent of exposure, treatment should be limited to sixty-minute sessions. Epilation should be well distributed over a large portion of facial area. The sensation experienced is similar to that of a pinprick. Sensitivity of the superior labial area should limit treatment in this area to fifteen minutes. Treatment may be scheduled twice weekly. So timed, this technique can diminish the bearded area evenly without discomfort to the patient.

The cost and time involved in the permanent removal of the beard merits discussion. Costs will vary, dependent upon the individual's beard being light or a highly developed heavy growth, and may be estimated to range from two hundred to one thousand dollars for a complete permanent epilation. The length of time necessary to remove the beard is determined primarily by the patient. The patient may elect thirty- or sixty-minute treatments, weekly, bi-weekly, or monthly. Much latitude must be allowed concerning above-mentioned costs and frequency of treatments, when considering such factors as beard density, quantity of distorted hair shafts, and their cycle of regeneration.

The effect of the outlined procedure is a decreasing need for daily shaving during the term of beard reductions. Sparsity of remaining hair shafts accentuates adjacent islands of denuded areas, which continue to enlarge as epilation progresses to the final stage. The skin, minus terminal and pigmented secondary shafts, appears favorably feminine and normal in every dimension. Skin pigmentation remains uninvolved, and to close inspection, it demonstrates no physical changes. Texture remains essentially normal and smooth, with no visible aberration pertaining to shedding scales, dehydration, postoperative inflammation, or reduction of sebum production (Rothman, 1954; Finifter, unpublished data).

Specific complications are remarkable by their rare incidence, being primarily limited to the mildest form of superficial inflammation of short duration. Minute scabs may appear sparsely upon the skin surface at some follicular apertures approximately twenty-four hours after epilation, and will remain affixed two to three days. The excreted sebum and intradermal wastes accumulate in the formation of vesicles, small in diameter and slightly elevated above the skin surface. This condition is rapidly overcome by application of warm compresses and repeated simple washing of the involved area. Vesicles, as noted, are not profuse. Their number is dependent directly upon the degree of individual's sebaceous production, a process thoroughly described by Rothman (1954). Regrowth of particular hair shafts may be attributed to distortion of the follicle, which thereby permits incomplete initial destruction

of the root structure. This regeneration is temporary, since the new hair-growth cycle produces a relatively straight, nondistorted hair which yields to effective epilation.

The male transsexual exhibits emotional anxiety or mental distress similar to that of normal women confronted with the prospect of coping with facial hirsutism. The beard denotes a male characteristic in the absolute sense and cannot be tolerated if feminization is to be brought to the fullest possible extent. Realization of this facet should not be minimized or compromised. Gender transformation encompasses complex and arduous procedures directed toward the physical and mental well-being of the transsexual. The beardless face unquestionably contributes to achieving the desired goal. With permanent removal of the beard, the most visible male reference is eliminated, thereby enhancing the transsexual in the role of femininity.

CHAPTER 22

OPERATIVE TREATMENT OF THE MALE TRANSSEXUAL

Howard W. Jones, Jr., M.D.

Preoperative Preparation

Most patients suitable for the sex conversion operative procedure have been living as females for many months. Indeed, at The Johns Hopkins Hospital, we consider it a preoperative requirement that this interval be six months and in many instances it has been much longer. Many have received estrogen in sufficient dose and for sufficient time to develop breasts of normal female size and to cause extreme atrophy of the testes and the prostate.

All patients are entitled to, but the transsexual patient requires, a detailed description of the operative procedure and the expected result by the responsible operating surgeon. While the sensitivity of the transsexual patient to pain probably is within the range of variations exhibited by other patients, they seem to have on the average a lower threshold for pain than other patients, although there have been notable exceptions. Thus, it is extremely important to forewarn the surgery candidates in very clear terms that the operative procedure is not a minor procedure and that it will cause considerable discomfort in the immediate postoperative period. Most of the discomfort is in association with preserving the vaginal cavity by means of a vaginal form kept in situ for a suitable period. In this respect, the transsexual is no different from otherwise normal female patients operated because of a congenital absence of the vagina, who must use the form. This form is often uncomfortable, and replacing it and taking a douche postoperatively is also uncomfortable. It seems important to have this thoroughly understood by the patients before they are operated and to have them prepared to experience discomfort and pain after operation. They cannot expect a functioning vagina unless they are willing to put up with this discomfort.

Above all, transsexuals need to understand that the reconstructed genitalia may not appear to them as perfect as they had envisioned. Many patients desire a perfect body form. They must clearly understand, prior to operation, that the postoperative appearance of the genitalia may fail to be quite up to their expectations. They should also know that an indwelling catheter or a suprapubic trocar cystostomy tube will be in place for several postoperative days.

We have excluded from surgical reconstruction any patient with an important systemic problem such as diabetes, extreme hypertension, and the like. We have also declined, as of the present, to operate on patients under the age of twenty-one years.

Operative Procedure

The patient is placed in the lithotomy position under general anesthesia. After proper preparation of the skin and suitable draping, the inverted U primary skin incision is made in such a way that the midline portion of the scrotal skin can be used to form a flap which will eventually become the posterior flap of the vagina (Figure 1). The incision is carried through the skin, the subcutaneous tissue, the dartos, and, finally, the tunica vaginalis testis is opened. Bleeding from the posterior flap is usually relatively minimal, and the flap may be packed in a moist saline sponge until needed later in the operative procedure. The testis, which is usually quite small in patients who have been on estrogen therapy, is pulled downward along with a portion of the spermatic cord, which is then secured with a suitable clamp. After the clamping, the cord is amputated and then doubly tied with #0 chromic catgut. The stump usually retracts into the inguinal canal (Figure 2).

The anterior flap is now developed by continuing the primary skin incision toward the distal part of the penis on the ventral side. The skin incision at the tip of the penis is usually just proximal to the corona of the glans and the skin and subcutaneous tissue so developed become the anterior flap to be used later in lining the vaginal cavity (Figures 3 and 4). The anterior flap may now be packed in saline sponges until needed at a later time.

Holding the denuded penis anteriorly, the fascia near its base is incised in the midline and the corpus spongiosum, together with the urethra, is dissected from the remaining portion of the penis. It is usually advisable to amputate the urethra rather more distally than appears to be necessary as there is a great tendency for the urethra to retract, and it is convenient to be able to handle the urethra by securing it with a Kelly clamp in an area which will be later discarded (Figure 5). The dissection of the urethra is carried posteriorly far enough to assure that in its final position there will be no kink between the meatus and the bladder. Using sharp dissection, then finally a Kelly clamp, the two

corpora cavernosa are separated, amputated, and individually ligated. This step is usually quite bloody, but it is desirable to separate the corpora so that no undesirable stump of the penis will remain. If the individualization of the corpora proves to be too bloody, they may be individually ligated by passing a large needle with a suture of #1 chromic catgut around each of the corpora (Figure 6).

The perineal dissection is now done to secure a suitable vaginal cavity. The approach is similar to that used in a perineal prostatectomy. The lateral fossa on each side of and below the central tendon are developed by blunt dissection with the finger introduced between the central tendon of the perineum above and the levator ani muscles below and laterally. The central tendon is divided, as well as the transverse perinei muscles, and the dissection carried down to the prostate, the posterior surface of which is exposed. However, the anterior layer of the Denonvillier's fascia is not opened as it is in a perineal prostatectomy, but rather the rectum is reflected off of the posterior surface of the prostate. If the vaginal cavity seems adequate at this stage, the dissection is not carried above the prostate in order to protect and preserve the nerves concerned with the voiding mechanism of the bladder. The prostate is usually extraordinarily small as a result of the estrogen treatment that these patients have been on for a prolonged period of time (Figure 7).

After the vaginal cavity has been created, a slit is made in the anterior flap in a suitable situation to properly position the new external urethral meatus. The slit is made in an anterior-posterior direction to preserve, as far as possible, the blood supply of the anterior flap (Figure 8). After hemostasis has been satisfactorily completed in the vaginal cavity, it may be lined with the anterior and posterior flaps. These are sutured together at their apex and it usually turns out that this apical suture line does not lie at the apex of the vaginal cavity, but rather three or four centimeters above the new urethral meatus. Thus, the apex of the newly formed vagina is covered by the posterior skin flap. The edges of the original incision may be sutured to the side of the anterior and posterior flap, but serum sometimes accumulates under the flaps and healing seems to be better if lateral sutures are rather loose or are interrupted (Figure 9). The success of the operation depends in large measure on the adequacy of the vaginal cavity and at the time of the operation some device must be used to prevent the contraction of the newly created space. This may be done by using a foam rubber covered firm vaginal form to which a special bracket is attached with elastic bands to the abdomen and back of the patient to hold it in place. Better still it may be accomplished by packing rather firmly the new cavity with gauze impregnated with an antibiotic. In either case, the packing or the specially created form must be removed and the flaps inspected after three or four days to prevent undue pressure which can embarrass the

circulation in the flaps and thereby cause necrosis (Figure 10). With increasing experience, the pack technique has proved superior in that pain is reduced, the flaps are less apt to necrose and the cavity is quite satisfactorily maintained.

With skill based on experience the entire operative procedure may be accomplished in about two hours, the blood loss is minimal, an indwelling urethral catheter is inserted, and a dressing pressurized with elastic adhesive tape completes the procedure.

Postoperative Care

With proper preoperative psychological orientation regarding what to expect, the postoperative period usually presents no special problems. Adequate analgesics and sedatives may be given for the first few postoperative days, as with any postoperative patient. Adequate psychiatric and psychological support in the postoperative period seems to be specially important. These patients tend to ask repeatedly the same question about their operation—was it a success? When will I be able to function? The surgeon may become weary of going over the same ground again and again.

Healing is usually quite good, but the distal ends of the flaps are at the extreme limit of an adequate blood supply and in some instances may slough. A tight vaginal form undoubtedly also impairs the circulation in the flap and a proper fit and care of the form postoperatively are an extremely important part of the entire procedure. The newly created vaginal cavity tends to contract very promptly and the form in the first several days after operation cannot be removed for more than a few moments at any one time. It may be necessary to do the first change of dressing under general anesthesia but after that, with most patients, the change of dressing can usually be accomplished without any special problems.

Bladder drainage may remain in place until healing has occurred, usually in a matter of eight to ten days. There has been no problem with the preservation of the flap in the region of the urethra or non-healing at the urethral flap junction.

The patient's estrogen, which can be discontinued for a day or two in the operative period, should be resumed as soon as practicable.

Six or eight weeks after operation healing is usually satisfactory for sexual relations. In some instances, however, healing has not been complete at the vaginal vault at this time. Nevertheless, healing will occur at the vault with time, and sexual relations may be undertaken prior to complete healing if this seems to be important.

The surgeon must be prepared to combat the tendency of these patients to desire polysurgery. It is not uncommon in the postoperative period to have transsexual patients experience a desire for plastic surgery procedures such as rhinoplasty, augmentation mammaplasty, etc. Where

clearly helpful, such procedures are quite desirable, but these patients should be restrained in their eagerness so that they would not overdo this aspect of their therapy.

Some of these patients are rather unreliable in their postoperative visits and therefore should perhaps be kept in the hospital somewhat longer than the average patient.

The long-term evaluation of the role of surgery from the psychiatric, psychological, endocrinological, and other points of view remains to be done. The justification for the operation depends on the results of such study.

NOTE: All these illustrations have been reproduced from an article by Howard W. Jones, Jr., Horst K. A. Schirmer, and John E. Hoopes, "A Sex Conversion Operation for Males with Transsexualism," *American Journal of Obstetrics and Gynecology* 100 (1968): 101–9.

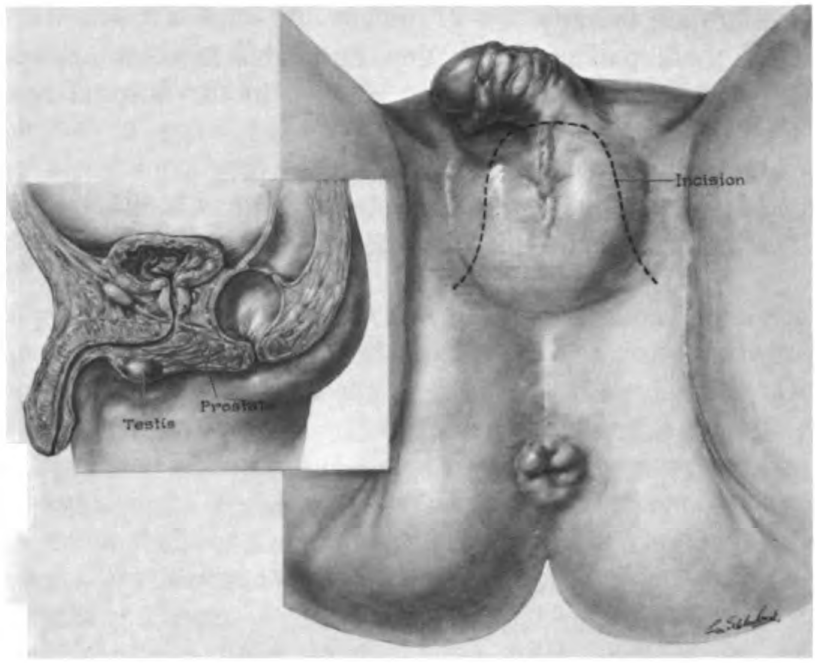
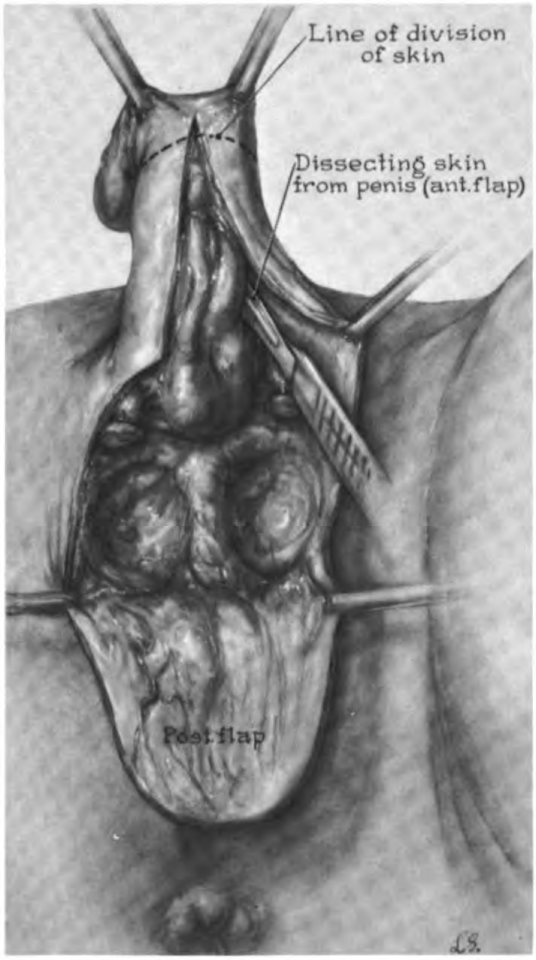


FIGURE 1. A sketch of the perineum showing the line of primary incision.

FIGURE 2. The right spermatic cord is clamped and ligated.



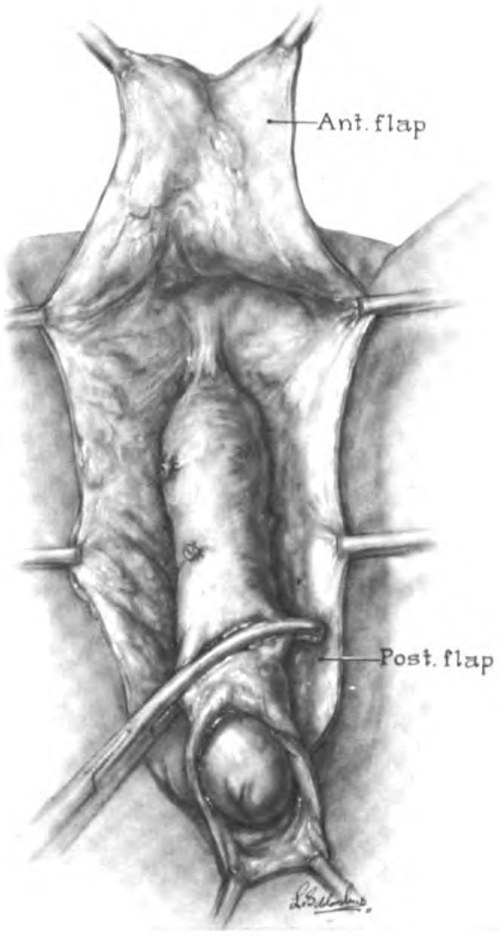


FIGURE 3. The primary incision is continued up the ventral side of the shaft of the penis.

FIGURE 4. The anterior flap is developed from the skin of the penis.

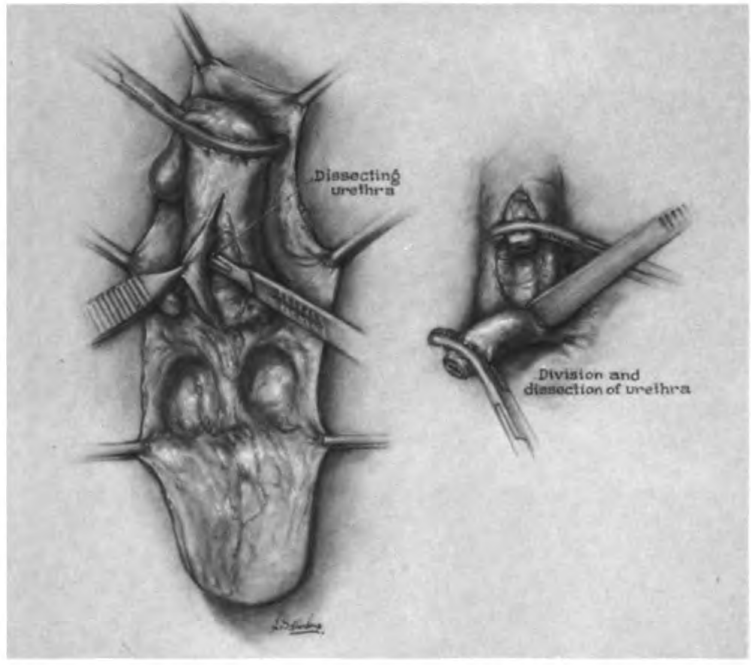


FIGURE 5. The urethra is dissected from the shaft of the penis.

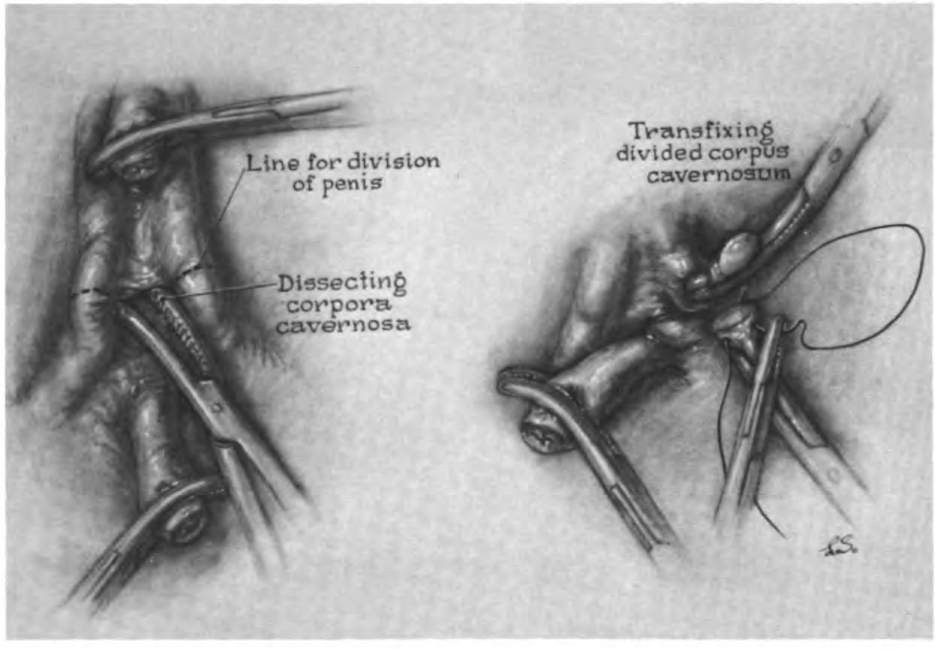


FIGURE 6. The corpora cavernosa are separated to assure a minimal stump.

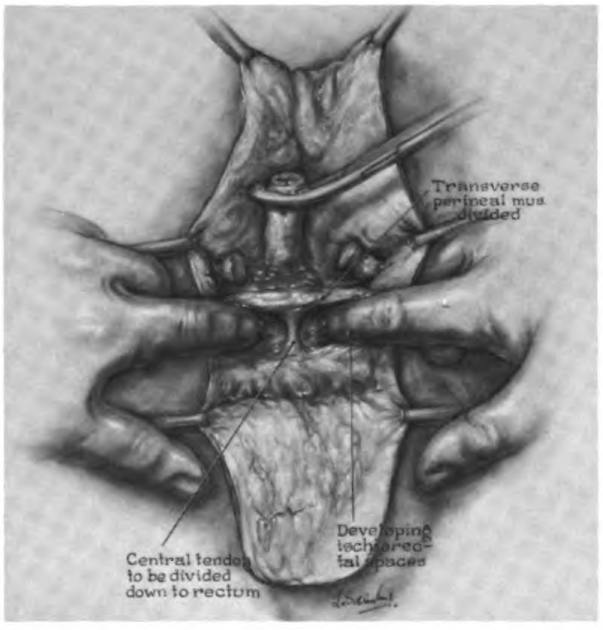


FIGURE 7. The perineal dissection.

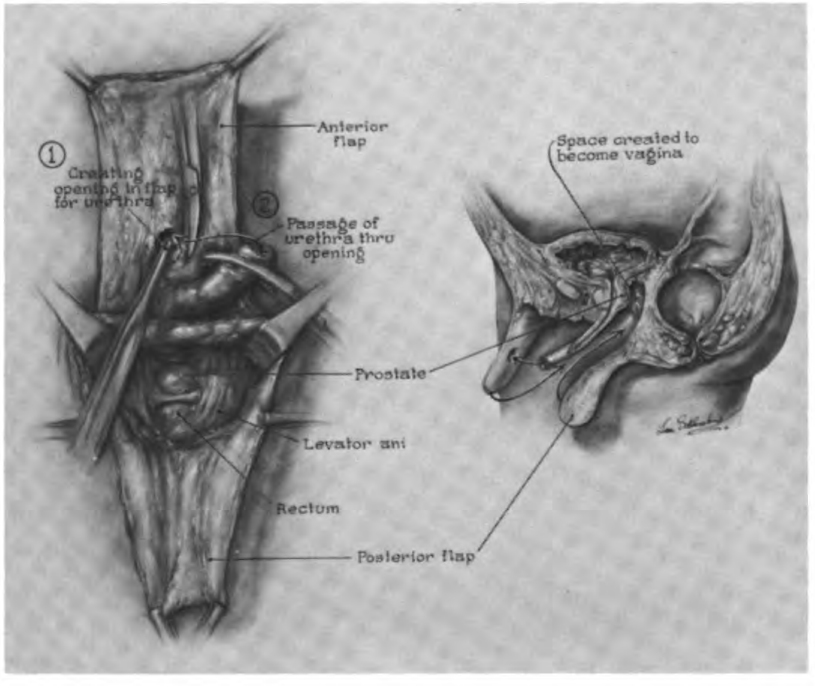


FIGURE 8. The perineal dissection has been completed and the anterior flap perforated to position the urethral meatus.

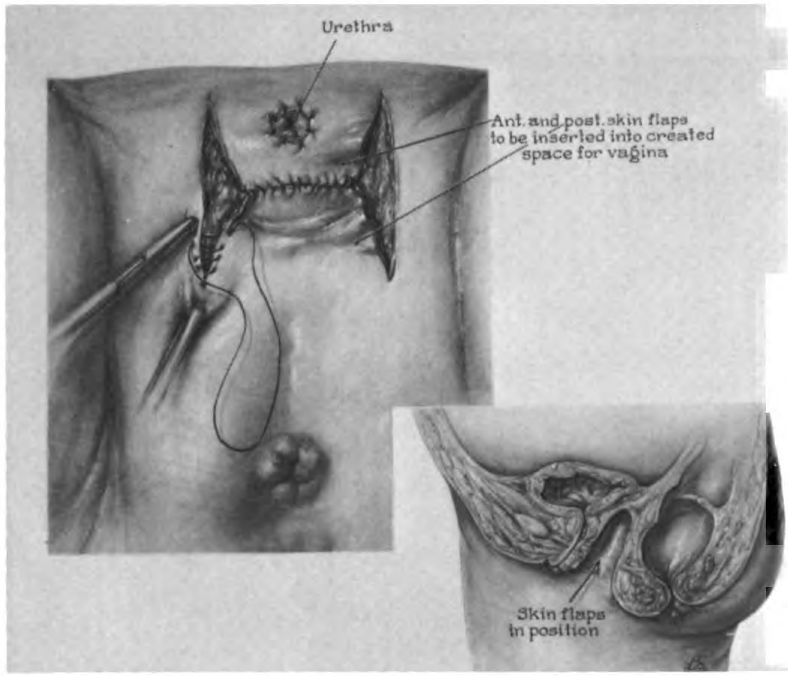


FIGURE 9. The skin flaps are sutured and placed in position in the vaginal cavity.

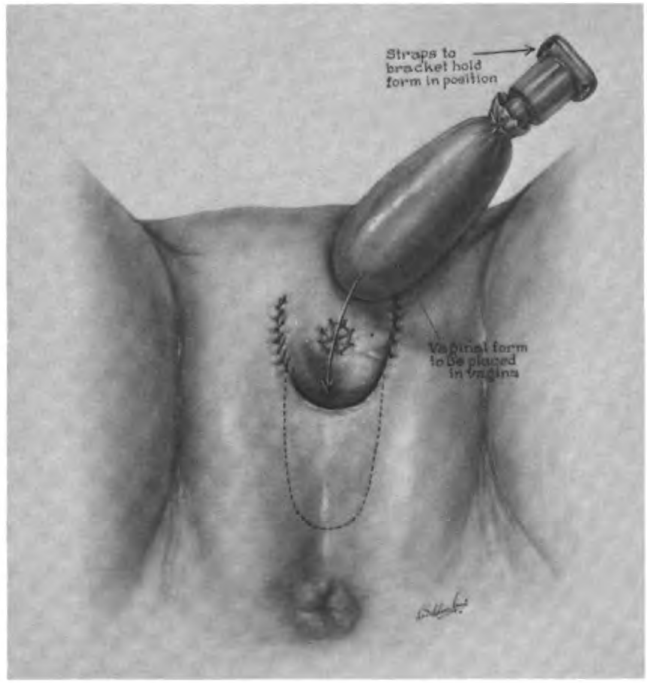


FIGURE 10. The preservation of the vaginal cavity is assured by the use of a suitable vaginal form.

CHAPTER 23

APPARATUS TO MAINTAIN ADEQUATE VAGINAL SIZE POSTOPERATIVELY IN THE MALE TRANSSEXUAL PATIENT

Patricia Hadley Thompson, R.N.

As indicated in the chapter on the operative treatment of the male transsexual, a vaginal form is necessary postoperatively in almost all cases. In some cases one has been placed at the time of surgery; more recently, a pack impregnated with antibiotics has been used initially and a form put in place several days later. This latter method appears preferable. This chapter describes some of the forms and the methods used to secure them in place, the objective being the best postoperative result with the least amount of discomfort to the patient.

In contrast to the genetic female who has an artificial vagina constructed to correct its congenital absence, the male transsexual patient lacks the perineal musculature to maintain a vaginal form and therefore requires some type of external harness. It is necessary to maintain adequate upward pressure to keep the vaginal vault open, but not to create excess pressure whereby restriction of the blood supply to the existing skin area is produced. An evaluation of the existing size of the vaginal cavity is made and a vaginal form of adequate dimensions is obtained. Once in place, the trial and error method is used until the ideal fit is secured.

At the present time several types of form are being used. One is a balsa wood form with a foam rubber sheathing, stockinette and plastic covering (Figure 1). Another form is made of lucite (Figure 2), and the latest is the silastic form (Figure 3). The lucite and silastic forms are much more easily handled and cleaned, but in cases where a softer form is required, the padded type is still used. Either the wooden or lucite form can be padded.

In most patients it has been found necessary to use a special bracket (Figure 4) to maintain the proper depth of insertion. The external

harness is composed of straps of amber surgical tubing of the size to correspond with the holes in the bracket. In the hospital, a muslin binder reinforced with adhesive tape is used as the medium to which the bands are attached with safety pins. This is convenient while in the hospital, as materials are readily available and apparatus can be kept neat, functioning, and clean.

Upon discharge, however, this arrangement is far from satisfactory in the mind of the patient. It is bulky, difficult to manage, and materials are not easily obtainable outside of the hospital.

An arrangement has been worked out whereby a normal elastic girdle of a strong quality without a crotch or long legs can be reinforced with a two inch piece of elastic around the top (Figure 5). It is necessary, however, to note that the elastic should be fitted to the girdle on the patient as it may not stretch as much as the girdle if fitted separately. The bracket is then fitted with a piece of elastic one quarter inch wide, the length being adequate to reach from the bracket to the top of the girdle front and back and to maintain adequate pressure. A sturdy hook is attached at each end of the elastic (Figure 6), of the type used on trousers. The bar piece of the hook and eye arrangement (Figure 5) is secured on the two-inch elastic band forward and back in a spot which makes the position comfortable for the patient (Figure 7). Once again the position should be chosen while bracket with straps and girdle are in place. The patient now has a girdle, stocking support, and form-holding device, all in one. Added to this, the patient can purchase and wear a separate device which is a rubber-lined brief. This may act as pants, as well as a perineal pad holder if needed, yet it is not as bulky as an entire pair of pants (Figure 8) and this allows the patient to void without removing the entire girdle. This brief is also available without the rubber lining.

For nighttime wear a two-inch band of elastic can be doubled in strength and made to fit the waist, and more of the previously mentioned bars can be attached (Figure 6). The form is thus held securely in place, with a device that is not cumbersome. This same device can also be used in the daytime when apparel does not require an undergarment in the nature of a girdle.

Some patients have not needed the bracket attachment. By merely using a panty girdle and perineal pad, adequate position and pressure on the form was achieved. Other patients have had surgical supply houses make an apparatus of their own design which pleased them. This was usually in the nature of a reinforced muslin band with attachments for the quarter inch elastic straps. The important matter, regardless of what is used, is assurance of adequate and not excess pressure. Too much pressure, as well as too little, can be a serious problem.

These patients are striving to be totally feminine; therefore, the more appealing the apparatus the more readily it is accepted and used. It is

not necessary for any or all of the aforementioned devices to be worn in sequential order. The major concern after proper tension is achieved is only for the comfort of the patient in the daily continual wearing of the vaginal form. Any other means designed or thought of by the patient, so long as it is adequate to maintain the proper pressure, is acceptable. Each patient reacts differently to the postoperative therapy.

After the vaginal incisions have healed, the vaginal form must be worn with persistence in order to secure an adequate cavity. The precise length of time varies greatly from patient to patient. In general, however, the form must be worn continuously for a least three months as long as there is any threat of closure of the vaginal cavity, or except for daily removal for cleaning. A douche may be taken at that time. For the next three months the form is worn less and less, so that by about six months adequate vaginal size will be maintained with normal physiologic dilatation two or three times per week.

FIGURE 1. Covered balsa wood form and components necessary to cover form.

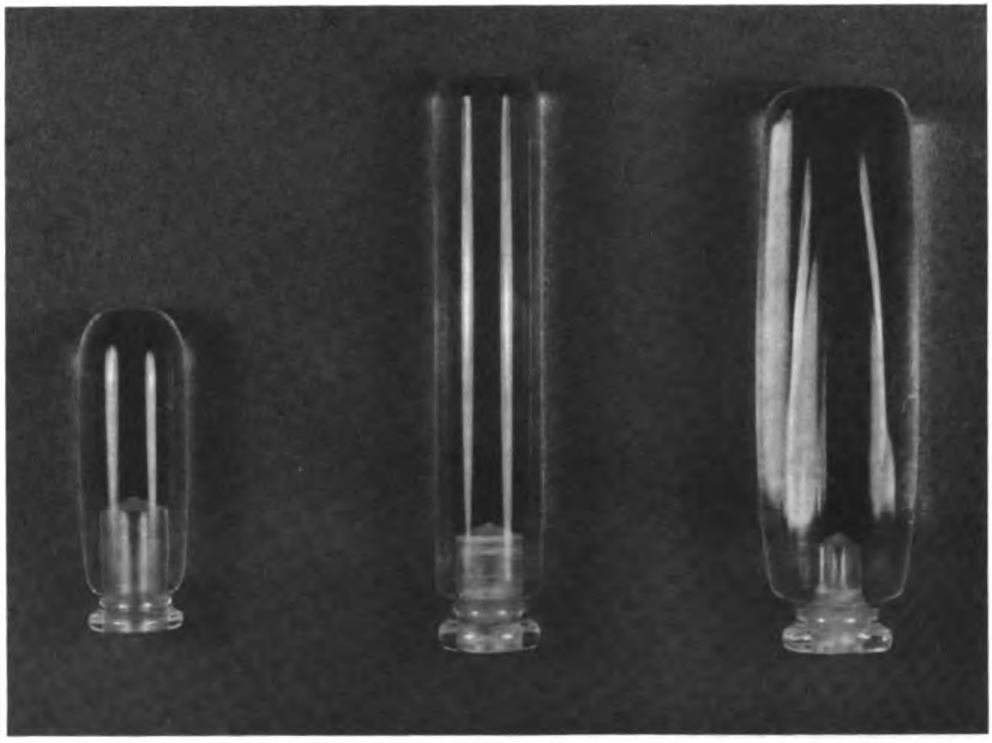


FIGURE 2. Lucite form—various sizes and shapes.

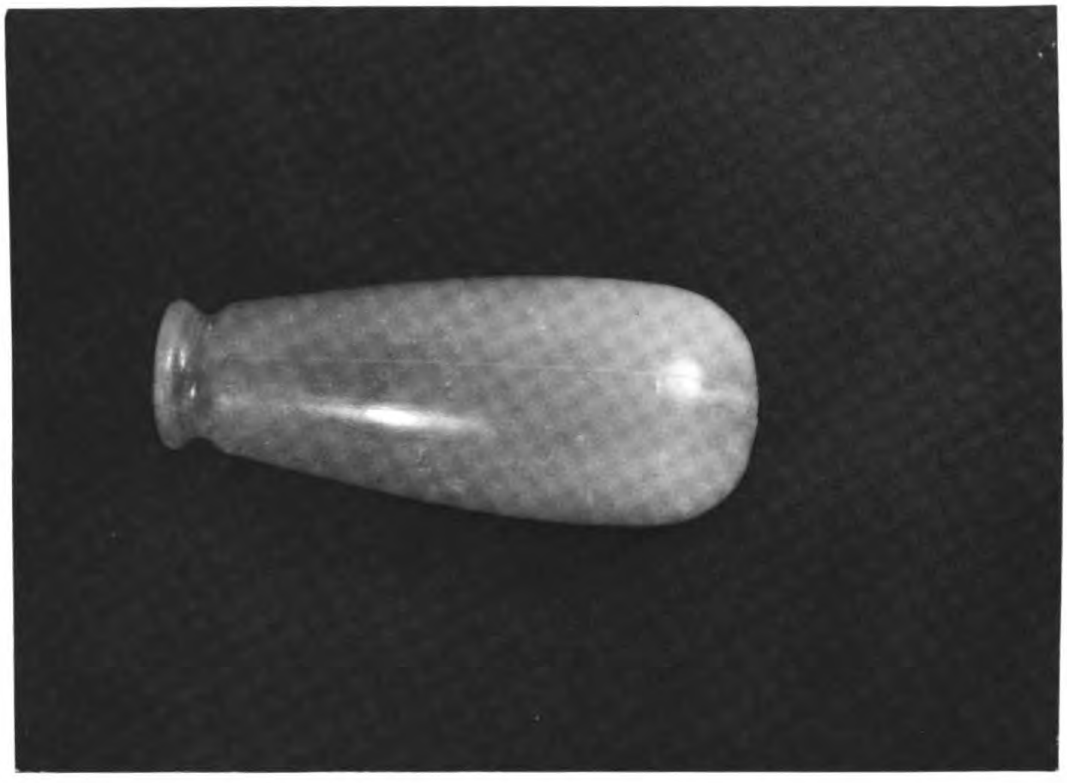


FIGURE 3. Silastic form.

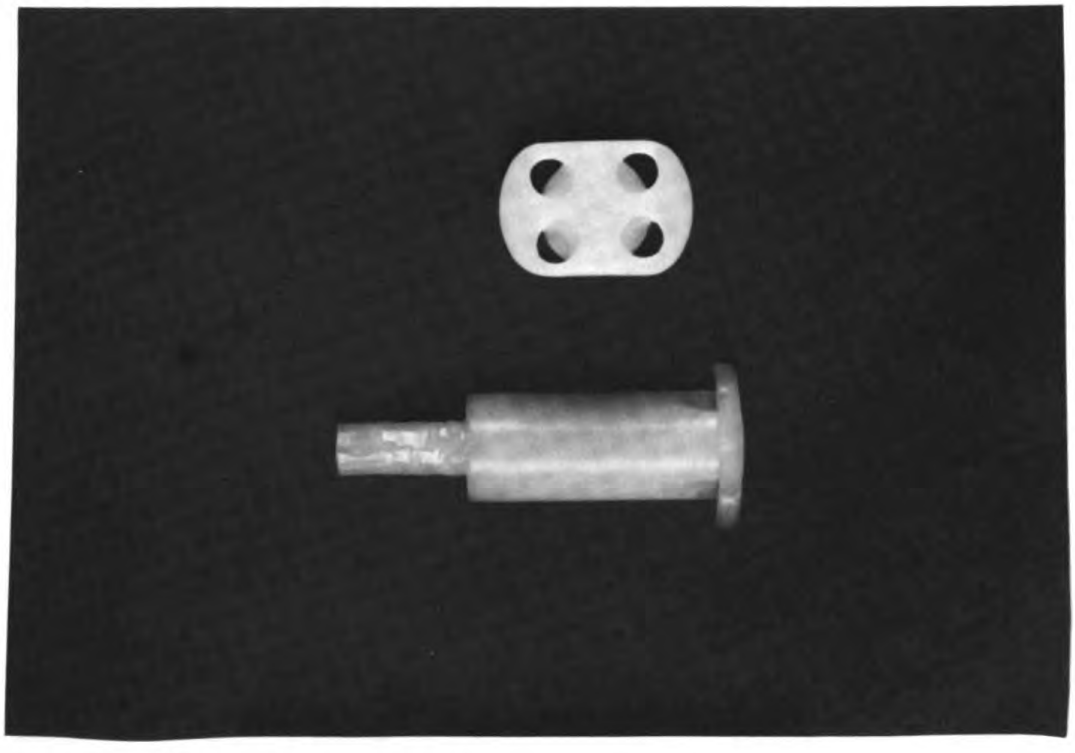


FIGURE 4. Bracket for attachment of harness.

FIGURE 5. Girdle with elastic reinforcement and bars.

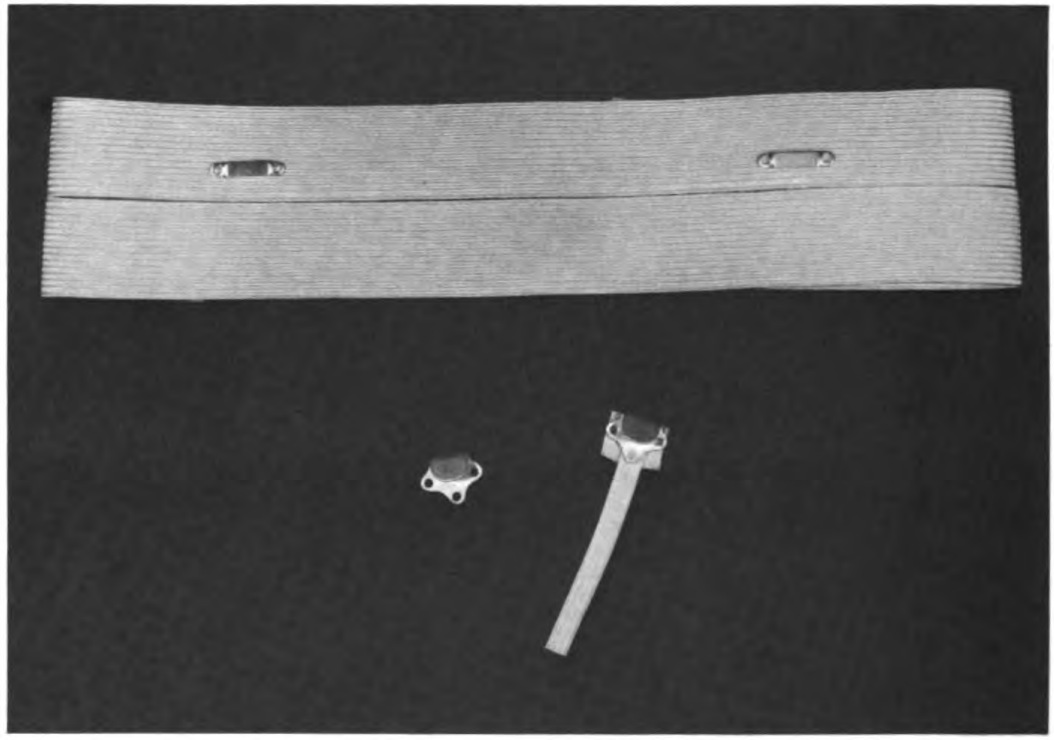


FIGURE 6. One-quarter inch elastic with hook and nighttime two-inch elastic bands.

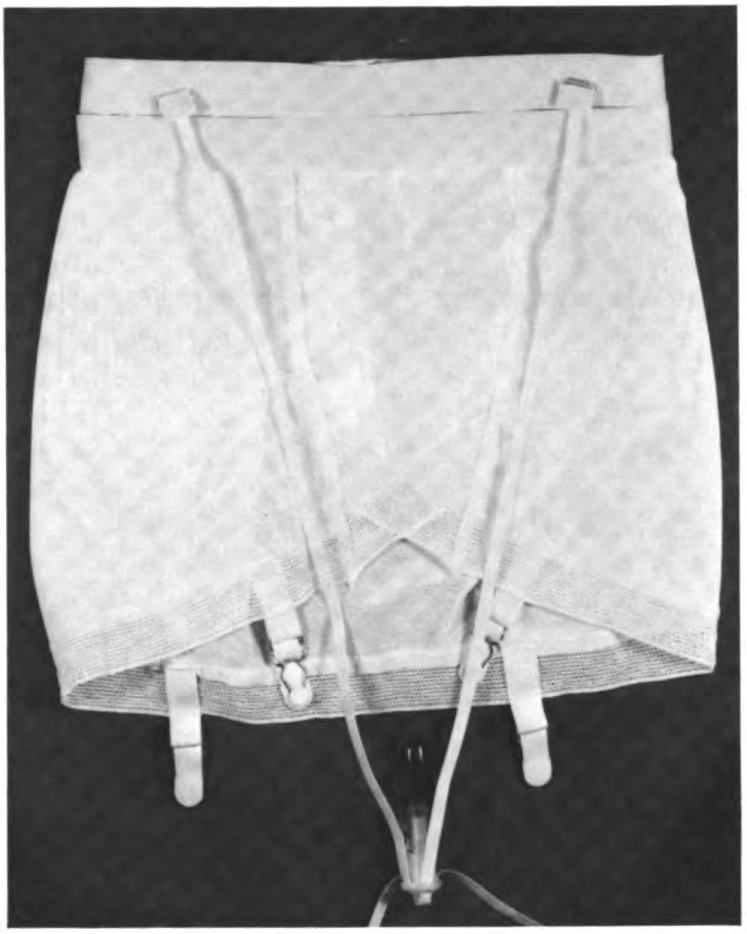


FIGURE 7. Entire apparatus as it would appear when in use by the patient.

FIGURE 8. Brief—used in place of panties.

CHAPTER 24

OFFICE MANAGEMENT OF THE POSTOPERATIVE MALE TRANSSEXUAL

Leo Wollman, M.D.

The primary objective in postoperative office management of the transsexual who has undergone a male to female conversion surgery is to prevent the shrinking of the vagina and stenosis of the newly created urethra. This continuous care begins usually three weeks or a month after the operation when the patient comes for the first office checkup.

At the time of the first visit after the surgery, the patient may or may not be wearing a mold or a stent, depending on the technique of the operating surgeon. An important caveat is to prevent stenosis of the newly created urethra. Several cases have been seen by the author in which the urinary stream was abnormal. In some cases, the urinary flow appears as a spray. Sometimes the urethra is so placed after surgery that in the squatting position, urination is directed over the toilet bowl instead of into it. In these cases, an adequate tilt of the pelvis is preferable to urethral surgery. In other cases, the flow is interrupted by stenosis of the urethral tract which may lead to cystitis and/or an eventual complete blockage of the urinary flow. The stenosed urethra should be mechanically dilated.

It is wise to be on the lookout for wandering sutures which appear close to the skin surface. If these are not removed, they may act as foreign body irritants and produce a local infection. Whenever any raw surfaces appear along the lines of an incision, these should be treated by cautery with a fused silver nitrate stick. This produces coagulation and leads to prompt healing.

It is essential to encourage continuous vaginal dilatation using whatever means are feasible in individual cases. The sheathed finger is the most readily available. Sponge material in a rubber condom, properly lubricated, may also usefully serve as a dilator. A dildo is commonly used for this purpose. These come in various sizes and are made of different materials, but are all phalloid in appearance. A hard plastic

mold or stent may sometimes be used and these are usually flattened superiorly to avoid trauma to the overlying urethra. Paraffin molds are sometimes used.

A rare complication is the breaking down of the floor of the vagina at the posterior fornix due to overzealous dilatation with a penis or an artificial dilating instrument. A useful dilator is the Kelly dilator which is a graduated, taper-like instrument made of aluminum. Using this light instrument, relatively painless dilatation of the vagina can be effected. A properly directed penis in heterosexual intercourse provides the most natural means of dilation.

The adequate care of the postoperative patient will include observation of other operative sites, such as mammary augmentation, rhinoplasty, and vocal cord shaving to reduce the protuberant Adam's apple. The routine care for these incisions should be observed.

A recent article in the *British Medical Journal* (Symmers, 1968) reports two cases of breast cancer, primary adenocarcinoma, in male transsexuals. In both, the onset was approximately five years after beginning estrogen therapy and obtaining augmentation mammaplasty. Both patients died at the age of thirty. The amount of exogenous estrogen used by the patients is not known; it may well have been excessive. These are the only two known cases of breast cancer in transsexuals. No similar cases have come to the attention of Harry Benjamin who has had a longer experience with and a larger series of hormonally feminized patients than any other investigator. The risk of breast cancer following hormonal feminization of the male thus remains unknown. The degree of risk may well be a function of the amount of hormone used; if so, the comparative statistics still have not been ascertained. The most likely possibility is that the hormonally feminized male transsexual, conservatively treated with estrogen, runs the same risk of breast malignancy as does a normal female. While increasing his chances of breast cancer, however, he reduces his chances of prostatic cancer (for which one method of treatment is castration plus estrogen medication). The degree to which the two risks counterbalance one another can be ascertained only by keeping and pooling accurate records made by all physicians who treat postoperative transsexuals.

It is, of course, necessary for the postoperative patient to continue the course of hormonal feminization in the case of the male transsexual, and androgenization in the case of the female transsexual. The usual spacing of the parenteral hormone therapy is bi-weekly, although longer intervals may be necessary in the case of those individuals who have to travel long distances to reach the physician's office. The hormones used are the same as those given preoperatively in preparation for surgery.

The proper management of the postoperative patient should include advice about dress, appearance, mannerisms, and style of walking as well as about the numerous details which make a woman feminine and a

man masculine. Above all, the patient has to be treated as one would treat a proper member of the female gender.

The physician who treats the post-surgical, sex-altered patient should ideally be a man with a background in several fields. He should have training in gynecology, have a psychiatric orientation, and command a good working knowledge of endocrinology. Above all, he should be an understanding and empathic individual, closely attuned to the newly created needs of his sex-changed patients.

CHAPTER 25

OPERATIVE TREATMENT OF THE FEMALE TRANSSEXUAL

John E. Hoopes, M.D.[1]

Sociologic and psychiatric considerations aside, the primary interest of the plastic surgeon in the transsexual problem is the technical challenge presented in the construction of aesthetically and functionally acceptable external genitalia. Surgical sex-reassignment procedures rely on the application of well-established basic principles of plastic surgery to the development of previously untried techniques. Construction of a vagina utilizing available penile and scrotal skin following penectomy and castration has proven entirely feasible and satisfactory. Creation of the male external genitourinary apparatus is not accomplished easily and is fraught with rather serious hazards.

The data of the Gender Identity Clinic of The Johns Hopkins Hospital, containing information relating to more than one hundred female transsexual patients, indicate that females constitute about twenty percent of the total group of transsexuals. In spite of a ratio of approximately four to one, it must be emphasized, the female is no more complacent in her ambiguous gender-role identification than her male counterpart. Psychiatric management has not provided the solution to this most difficult problem. The surgery, often considered outrageously excessive and meddlesome by the uninformed, must be undertaken regardless of the censure and taboos of present society.

Information regarding operative procedures performed on female transsexual patients appears rarely in the literature. Isolated reports of surgical techniques utilized in individual patients (Millard, 1966) are of considerable value but provide little guidance in terms of comprehen-

[1] I wish to express my indebtedness to Dr. Milton T. Edgerton, Jr., for his most helpful suggestions regarding the surgical techniques employed in female-to-male surgical sex reassignment. Dr. Edgerton operated upon two of the six patients who are discussed in this chapter.

sive management. A recent survey of the literature dealing with transsexualism (Pauly, 1966) yielded reports of only twenty-two female transsexual patients who had received surgical procedures. Pauly emphasizes the probability of overlapping reports and, thereby, indicates that the total number of reported operated females is possibly fewer than twenty-two. Previous reports indicate that the operative approaches to date have been of relatively limited extent, consisting of obliteration of the vagina, breast amputation, and hysterectomy. Enlargement of the clitoris by means of hormone therapy has been accepted as an inadequate substitute for construction of a phallus.

Available data regarding the postoperative adjustment of operated male transsexual patients clearly indicates the results of surgery to be at least satisfactory in the substantial majority of cases. There exists reasonably good evidence that equally satisfying results can be obtained with the female transsexual patients (Pauly, 1963). Benjamin (1967a) describes his personal observations regarding a small series of postoperative female transsexual patients and considers the results of the operative procedures "good or satisfactory" in all except one case, which he classifies as "doubtful."

This chapter attempts to provide at least a partial guide to the operative management of the female transsexual patient. Emphasis will be placed on the selection and timing of various operative procedures and on the surgical techniques generally found most satisfactory.

Clinical Material

Six female transsexual patients have undergone evaluation at The Johns Hopkins Hospital in the last twelve years, five of them in the last three years. At the time of initial consultation, the patients ranged in age from twenty-eight to forty-eight years (average: 32.8 years). Five patients have received surgical procedures at The Johns Hopkins Hospital; two patients had undergone hysterectomy and one patient had received breast amputation prior to seeking treatment at The Johns Hopkins Hospital. The single unoperated patient is in the early phases of evaluation by the Gender Identity Clinic. Two of the five operated patients wish no further operative procedures, having received mastectomy and hysterectomy. In addition to the two patients currently undergoing staged construction of a phallus, a third patient is scheduled for combined hysterectomy and the initial stage of phallus construction. Two patients are now married as men, one with an adopted child. A third patient is engaged to be married.

It is not within the scope of this discussion to explore in detail the psychologic and psychiatric aspects of the female transsexual patient, but a brief characterization of the group of patients being studied seems not inappropriate at this time. Our limited experience leads us to believe that the female transsexual patient is, in general, more of a "solid

citizen" than her male counterpart. All of the six patients evaluated thus far have demonstrated above average intelligence, and all hold responsible and respected social and occupational positions. Many female transsexual patients volunteer that they have vigorously pursued careers, consisting of obtaining advanced university degrees or of choosing aggressive business or governmental occupations, in order to be able to excuse themselves to society for remaining unmarried. In comparison with the usual male transsexual patient, one is impressed with the absence of histrionic tendencies and/or antisocial behavior. Evaluation of the patients' current sociocultural status at the time of the initial evaluation revealed a totally masculine orientation. It is, indeed, exceedingly difficult to conceive of these patients in a feminine role. Negotiations toward surgery were accomplished in a businesslike and non-urgent manner. Surgery and the immediate postoperative period were accepted with notable stoicism of the type usually attributed to males. The male transsexual typically demands complete feminization; requests for additional surgery, including rhinoplasty and further plastic revision of the external genitalia, are not uncommon. The female transsexual patients seem to have more reasonable expectations and are more willing to accept imperfections. A somewhat curious finding is that all of the female transsexual patients have been of average female size; therefore they present as relatively diminutive, non-impressive males (Figure 1). None of the patients operated upon has been more than 5 feet 6 inches in height, and none has weighed in excess of 140 pounds. This, again, emphasizes the total absence of correlation between gender-role identification and body habitus.

The history obtained from the female transsexual patient may describe the onset of breast development and menstruation as being exceedingly disturbing, inexplicable, and humiliating. The female transsexual patient, perhaps considerably more than the male, feels quite strongly that "something is wrong internally." The menses are regarded as loathsome and often are described as being exceedingly painful. Many patients will seek and perhaps obtain exploratory laparotomy and hysterectomy firmly convinced that testes and other male organs will be discovered.

The motivation for hormone therapy and surgical sex reassignment in the patients under study was an overpowering desire to assume completely the social and legal status of a male. Some male transsexuals, by contrast, seemed relatively content to achieve feminine physical attributes, and their plans regarding future activities, including marriage, were nebulous at best. The typical female transsexual patient feels equally compelled to attain physical characteristics consistent with gender-role identification; but, in addition, views this "correction" as a necessary prelude to achieving the ultimate goals of "being successful" in a masculine world and supporting a wife or, even better, a family.

Preoperative Requirements

It is our firm opinion that sociocultural identification crises are best avoided by insisting that the potential surgical candidate assume complete social and occupational gender-role identification of the desired sex for a minimum period of one year preoperatively and receive hormone therapy for a minimum period of six months preoperatively.

Exceptions are, of course, made to the above rule. On the basis of psychiatric recommendation, one patient received breast amputation and one patient is scheduled to receive hysterectomy with bilateral salpingo-oophorectomy as the initial step in management, preceding hormone therapy and insistence on public cross-dressing. In both instances, the procedures were felt justified as the most workable basis for alleviating anxiety and conditioning the patient "in stages" for the transitions which they insisted upon. To the former patient, the breasts had become objects of abhorrence and literally could no longer be tolerated. This patient emphasized graphically that she would either find someone who would perform the operation, or she would accomplish the desired result herself. The latter patient was irrevocably convinced that "something was wrong internally," accounting for her irregular and exceedingly painful menstrual periods. Construction of male genitalia is attempted only after the rigid requirements as initially stated have been fully satisfied.

Hormonal therapy with testosterone contributes a great deal to both the psychological and physical transition: the voice deepens, a beard develops, the breasts atrophy, the clitoris enlarges (Figure 2), and the musculoskeletal system and body habitus become progressively more masculine. Hormone therapy produces a significant reduction in the patient's anxiety. Testosterone enanthate (Delatestryl®) in a dosage of 200 milligrams is administered intramuscularly each two to three weeks. Some patients have embarked on a weight-lifting program coincident with the initiation of hormone therapy, and the overall result is dramatic.

Psychiatric criteria utilized in the preoperative selection of potential surgical candidates are presented in Chapter 18 by Knorr, Wolf, and Meyer. Individuals younger than twenty-one years of age are not presently considered for surgery. Parental or next-of-kin involvement is mandatory. Operative procedures are not entertained without the express permission of the appropriate relatives. Contemplated surgery for all pending cases is discussed within the Gender Identity Clinic, and each procedure requires the unanimous consent of the Clinic members.

Breast Amputation

The initial stage in the surgical female-to-male sex-reassignment program consists of removal of the breasts. When first confronted with this problem, the male surgeon experiences mixed emotions while

listening to the plea for surgery from a physically attractive young female and while examining the breasts (Figures 6a and 6b) for the specific purpose of amputation. Nevertheless, the patients uniformly say they were appalled by the development of breasts during puberty and even more vehemently detest their continued presence. Selection of breast amputation as the primary procedure is in keeping with the patient's major quest and, in addition, seems less of a surgical assault than combined one-stage hysterectomy and beginning construction of a phallus. This is in keeping with the basic premise of a gradual transition, allowing the patient adequate time to adjust to each step in the program. It might be pointed out that changing body-image concepts associated with a relatively minor operative procedure (rhinoplasty, for example) in the usual cosmetic plastic surgery patient may be stressful to a greater or lesser degree.

Two of the four female transsexual patients who received breast amputation at The Johns Hopkins Hospital presented for evaluation after having received hysterectomy elsewhere. Three of the four patients had been receiving hormone therapy for several years prior to being evaluated by The Johns Hopkins Clinic. One patient underwent breast amputation in the absence of previous surgical procedures or hormone therapy.

The administration of testosterone results in only moderate atrophy of the female breast. The younger patients in whom hormone therapy is initiated during the late teens or early twenties may experience considerable diminution in breast size (Figure 4a); testosterone apparently has little or no effect on the well-developed, moderately ptotic breasts of the older patients (Figure 3). Basically, two types of surgical procedures are utilized for removal of the breasts, dependent entirely upon breast size: excision of breast tissue through a circumareolar incision, or amputation of the entire breast.

Markedly hypotrophic breasts are best managed by excision of the breast tissue through a circumareolar incision in the manner described by Webster (1946). Surprisingly substantial masses of breast tissue can be removed through this "keyhole" incision. The operation is best performed utilizing general anesthesia: a five-day period of hospitalization is recommended. After carefully marking the mid-transverse line of the nipple and areola, an incision is outlined entirely within the margin of the inferior hemisphere of the areola (Figure 4b). Infiltration of the area of proposed incision with a 1:100,000 solution of epinephrine in saline substantially reduces bothersome skin bleeding. Throughout the procedure, the dissection is maintained immediately adjacent to the breast pseudo-capsule. Excessive sacrifice of either subcutaneous fat or the adipose tissue overlying the pectoralis major muscle will result in a most displeasing "saucer deformity" with the nipple adherent to the pectoralis fascia below the level of the surrounding

skin. Wide undermining of the skin and subcutaneous tissue overlying the superficial aspect of the breast tissue is followed by bisection of the breast tissue in a vertical dimension to facilitate its removal; each breast mass is, therefore, removed as a medial and lateral half (Figure 4c). Meticulous hemostasis is accomplished with the cautery. Wound drainage is secured with a small Penrose drain or a Hemovac catheter left in place for forty-eight hours. A firm circumferential pressure dressing is applied to the chest. The patient is discharged from the hospital following the initial dressing change on the fifth postoperative day; a moderate pressure dressing is maintained for an additional five days. The result achieved is aesthetically quite satisfactory (Figure 4d).

Amputation of the entire breast with free transplantation of the nipple and areola is required for the removal of breasts of more than moderate size. Preoperative marking of the proposed line of incision is essential to the goal of achieving a line of wound closure overlying the inferior and lateral free margin of the pectoralis major muscle (Figures 5a and 5b). The medial-most point of the submammary fold is marked carefully while the patient is in a sitting position. The inferior incision is carried laterally within the submammary fold, thence curves superiorly and laterally overlying the free margin of the pectoralis major muscle to terminate within the anterior axillary fold. The superior incision is outlined in the same curvilinear fashion immediately above the superior margin of the areola, thereby creating a superiorly and medially based flap of skin and subcutaneous tissue of sufficient length to reach the inferior wound margin. Care is taken to assure that the superior skin flap is of approximately the same thickness as the skin and subcutaneous tissue overlying the normal male anterior chest; specific attention is directed toward properly thinning the distal margin of the flap commensurate with the quantity of subcutaneous tissue in the inframammary region. Meticulous hemostasis is observed; wound drainage is a matter of choice. Proper location of the nipples and areolae requires deliberate planning; the common tendency is to place the nipples in too high and too medial a position. Penn (1955) stated that the nipples normally are 21.6 cm. from the suprasternal notch and one-half that distance from the midsternal line. Trier (1965) reported measurements in sixty-two males indicating that the average distance from the suprasternal notch to the nipple is 18.3 cm., and the average distance between the nipples is 22.9 cm.; in the sixteen shortest males the average distances were 17.8 cm. and 21.6 cm. respectively. A location overlying the fifth intercostal space not less than eleven centimeters from the midsternal line has proven satisfactory. A circular area of skin two centimeters or less in diameter is removed at the level of the dermis from the chosen location. The nipple and an appropriate quantity of the surrounding areola is removed as a full-thickness graft from the amputated breast specimen and applied to the recipient area with interrupted

sutures which are left long to be tied over a Stent dressing of grease-gauze and moist absorbent cotton (Figure 5c). A firm circumferential pressure dressing is applied to the chest. The dressing is changed initially on the fifth postoperative day, and the patient is usually discharged at this time. The results achieved thus far have been gratifying (Figure 5d). One patient suffered partial loss of a nipple graft; both nipple areas subsequently were excised and replaced with full-thickness grafts of labia minora which provided quite satisfactory areolae with the proper degree of pigmentation. A period of at least one year is required for scar maturation. Scars which are moderately hypertrophic are managed by means of Kenalog® injections.

Hysterectomy and Oophorectomy

Two female transsexual patients have undergone hysterectomy with bilateral salpingo-oophorectomy at The Johns Hopkins Hospital; a third patient is scheduled for the procedure. Two patients obtained hysterectomy elsewhere but were unable to locate a surgeon willing to undertake breast amputation.

Hysterectomy combined with the initial stage of phallus construction constitutes the second step in the program of surgical sex reassignment. Hysterectomy is performed through either a lower midline incision or the inferior extremity of the medial incision constituting the margin of the abdominal pedicle flap to be utilized in phallus construction. The hysterectomy is performed in the usual fashion with no attempt being made to obliterate the vagina. The uterus, salpinges, and, particularly, the ovaries are markedly atrophic in patients who have received hormone therapy over a protracted period of time.

Construction of Male Genitalia

Two of the six female transsexual patients evaluated at The Johns Hopkins Hospital currently are undergoing staged construction of a phallus, and one additional patient is scheduled for the procedure. Two patients are entirely pleased with the results of hormone therapy, breast amputation, and hysterectomy and feel that they do not wish to embark upon the multistaged procedures required for construction of a phallus.

The patients fully understand that the phallus will serve little, if any, role in sexual activities; and it is hard to comprehend that they insist on undergoing the multiple hospitalizations and relatively extensive operative procedures when they are aware of the severe limitation of this technique. The "fear of discovery" is most probably a strongly motivating factor in many of these patients. All transsexual patients, male and female alike, express profound anxiety about being placed in an uncontrolled environment through accident or illness and thereby being "unmasked." An unavoidable everyday occurrence, the men's room, evokes this same anxiety. From the point of view of the patient, a simple

abdominal tube pedicle flap phallus not containing a urethra provides considerable psychological security; a phallus serving a urinary function is entirely satisfactory; and a phallus capable of sexual activity is "too much to be hoped for."

It must be emphasized that the goal of surgery in the transsexual patient is to achieve an anatomical situation consistent with the patient's gender-role identification. Sexuality, as commonly understood, is far less important. The potential surgical candidates, male and female, are asked if they would still consider the surgery if a necessary consequence of the procedure would be that they could no longer engage in sexual activity of any description. Routinely the answer is without hesitation an emphatic "yes." Nevertheless, sexual activity is a normal human function, and the ability to "please a woman" strongly reinforces the female transsexual patient's sense of masculinity. The female transsexual who engages in sexual activity with "another" female is, by classical definition, a lesbian. Nevertheless, the patient will, typically, adamantly reject the concept that either partner is homosexual. The female transsexual uniformly assumes the aggressive or masculine role in the relationship and will not tolerate stimulation of "her" breasts or external genitalia. The coitus training device is utilized commonly for sexual intercourse but is grossly unsatisfactory in terms of satisfying body image concepts.

Creation of male external genitalia is not to be undertaken without deliberate planning and a substantial background of plastic surgical experience. One must be prepared fully to deal with the complications attendant upon loss of free grafts and pedicle flaps, and one must be conversant with the management of urinary problems in the form of fistulae, urinary tract infections, and incontinence. A considerable volume of experience is reported in the literature on the management of traumatic avulsions of the penis and scrotum.

PHALLUS

Gelb, Malament, and LoVerme (1959) thoroughly reviewed the experience dealing with total reconstruction of the penis. They point out that there is no literature prior to the 1920s and that the currently accepted techniques are based on utilization of the Gillies-Filatov abdominal tube pedicle flap described in 1916. Apparently, the first report of total reconstruction of the penis was by Bogoras (1936) who employed an abdominal tube pedicle flap and provided rigidity with an autogenous rib cartilage graft; the urethra was allowed to exit through the perineum. Frumkin (1944) utilized a similar abdominal flap-cartilage technique and, in addition, attempted urethral construction by means of a tube pedicle flap from the inner aspect of the upper arm; he stated that a urethra could not be incorporated into the reconstructed penis. Maltz (1946) constructed the phallus from an abdominal tube

pedicle flap and introduced the concept of inserting a second tube pedicle flap within this flap as the urethra. Bergman, Howard, and Barnes (1948) reported their experiences utilizing the techniques of Bogoras and Frumkin. The currently most satisfactory technique for creation of a phallus was developed by Gillies (1948) on the basis of the Maltz procedure. The Gillies technique will be elaborated upon subsequently. A beautiful example of the results obtainable by this procedure is reported by Millard (1966). Additional experience with the Gillies technique is reported by Farina and Frier (1954) and Gelb, Malament, and LoVerme (1959). McIndoe (1948) described a lower abdominal midline tube pedicle flap incorporating an inlay split-thickness skin graft as the urethra. Munawar (1957) emphasized the importance of using the clitoris as a "penile peg."

Urethra

Maltz (1946) apparently was the first to construct a penis containing a functional urethra. As mentioned previously, the Gillies technique is most satisfactory for total construction of the phallus and urethra. Inlay split-thickness skin grafts were utilized successfully by McIndoe (1948) and Best (1962). Arnerpi (1959) and Evans (1963) employed the Dennis-Browne buried-skin-strip urethroplasty technique. Evans, interestingly enough, described a re-operation of one of Gillies' original cases. Morales, O'Connor, and Hotchkiss (1956) reported failure using a graft of bladder mucosa for urethral construction. The Johns Hopkins Hospital surgeons have had limited experience with the utilization of ileum and tube pedicle flaps of vagina and labia minora in urethral construction.

Rigidity

Various attempts, generally not entirely satisfactory, have been directed toward constructing the phallus as a functional sexual organ. Autogenous rib cartilage grafts have proven most satisfactory, and a substantial experience has been reported by several authors (Bogoras, 1936; Frumkin, 1944; Bergman, Howard, and Barnes, 1948; Gelb, Malament, and LoVerme, 1959). Acrylic implants have been utilized by several investigators (Goodwin and Scott, 1952; Morales, O'Connor, and Hotchkiss, 1956; Loeffler and Sayegh, 1960) and have been found to be unsatisfactory. Morales and coworkers also described the use of implanted steel mesh. Munawar (1957) implanted a periosteal tibial bone graft and created a suspensory ligament by means of a fascia lata graft attaching the bone graft to the anterior rectus sheath. Farina and Frier (1954) felt that rigid implants were unnecessary on the basis that fibrosis within the abdominal tube pedicle flap provided sufficient rigidity. Millard (1966) described a patient who enjoyed satisfactory sexual intercourse with the aid of a "stiffener" inserted into the skin urethra.

Scrotum

Apparently, the initial scrotal construction was accomplished by Gillies (1957) in the course of a surgical sex reassignment. A bipedicle flap from the symphysis, incorporating the pubic hair, was lifted over the constructed phallus and sutured beneath it like a sling. The pubis was left bare, and the cosmetic result was less than ideal. Robinson, Stephenson, and Padgett (1946) described generous medial thigh flaps based superiorly and medially. Douglas (1951) reported sliding thigh flaps requiring previous delay and further requiring skin grafting of the donor areas. Utilization of the labia majora would seem an appropriate procedure in scrotal construction associated with surgical sexual conversion; however, they do not provide tissue of sufficient bulk to construct an acceptable scrotum. Millard (1966) nicely reviews the previously reported techniques of scrotal construction and describes a procedure that would seem to be most satisfactory. Bilateral inguinal skin flaps based inferiorly and slightly posterior to the base of the phallus are designed extending into the pubic and inguinal regions, thereby incorporating a portion of hair-bearing skin. The flaps are elevated without a previous delay, and the donor areas are closed primarily. Silastic testicular prostheses may be introduced into the constructed scrotum.

The initial stage of phallus construction is undertaken in conjunction with hysterectomy. As mentioned previously, the hysterectomy is performed through either a lower midline abdominal incision or the inferior extremity of the medial incision delaying the abdominal tube pedicle flap. The Gillies technique employs three parallel abdominal incisions (Figure 6a). The lateral incision outlines the lateral margin of the abdominal tube pedicle flap; the middle incision outlines the medial margin of the abdominal pedicle flap and the lateral margin of the abdominal skin to be utilized in the construction of the urethra; and the medial incision outlines the medial border of the abdominal skin urethra. The distance between the middle and medial incisions must be at least four centimeters; the incisions are made as long as seems appropriate, with the inferior pedicle of the abdominal pedicle flap based on the superficial inferior epigastric artery. Venous drainage, superiorly and inferiorly, is provided by the thoracoepigastric vein. The middle and medial incisions are made as outlined, and the lateral and medial margins of the intervening skin are undermined at the level of the external oblique aponeurosis for a sufficient distance to allow tubing of this flap skinside inward (Figure 6b). Difficulty in the form of fistula formation has been encountered on the basis of using non-absorbable dermal sutures in the urethral closure. The lateral incision is made, and the abdominal pedicle flap is undermined completely between the superior and inferior pedicles and advanced over the future urethra (Figure 6c). A split-thickness skin graft obtained from the buttock or the abdomen

inferior to the umbilicus is applied to the donor defect of the abdominal pedicle flap.

The second stage may be performed after a waiting period of three weeks and consists of undermining the abdominal pedicle flap together with the future urethra and tubing the abdominal pedicle flap so as to incorporate the urethra (Figure 6d). An additional skin graft is required at this stage.

The third stage, again after a waiting period of three weeks, consists of dividing the superior pedicle of the abdominal flap and implanting this superior pedicle into the desired location (Figure 6e). An important feature of this implantation is preservation of the dorsal integument and innervation of the clitoris and incorporation of the clitoris into the dorsal surface of the pedicle flap. Division of the remaining inferior pedicle of the abdominal flap requires a previous delay procedure which is performed on an out-patient basis using local anesthesia.

Division of the inferior pedicle and fashioning of the future urethral meatus provide the basic elements of the constructed phallus (Figure 6f). Direct anastomosis of the urethral meatus to what was previously the superior extremity of the new urethra completes the endeavor. It is our intention to obliterate the vagina at the time of scrotal construction.

An exceedingly important feature of the reconstruction is the realization that the normal female urethral meatus is situated too far posteriorly to allow direct anastomosis between this meatus and the urethra within the abdominal tube pedicle flap. The meatus must, therefore, be advanced to a more anterior position prior to implanting the end of the abdominal pedicle flap destined to become the base of the constructed phallus. Advancement of the urethra anteriorly is best accomplished utilizing a strip of skin sutured on itself to form a tube and covered with local tissue. This preparatory maneuver may be undertaken either at the time of tubing the abdominal pedicle flap to incorporate the urethra or at the time of delaying the pedicle of the abdominal flap. Anastomosis of this anteriorly positioned urethral meatus to the urethra within the abdominal pedicle flap is easily accomplished at the time of implanting the pedicle flap into its proper location.

Attempts to employ local tissue in the form of tube pedicle flaps of vaginal mucosa and labia minora for urethral construction have not proven entirely satisfactory. In one patient, a segment of ileum with intact mesentery was incorporated into a previously constructed abdominal tube pedicle flap. Postoperative vascular complications within the pedicle flap sabotaged the procedure.

Current Status of Female-to-Male Surgical Sex-Reassignment

There has been some justification for the basic tenet that surgical sex reassignment constitutes appropriate therapy for selected transsexual individuals. The patients have manifested no postoperative

anxiety or adjustment problems. Characteristically, the patients demonstrate an attitude of extreme gratitude for every step in the conversion program. The data obtainable on the basis of a brief follow-up period have been reassuring. It is difficult to select a familiar surgical procedure with which the sex reassignment procedure can be compared. Patients receiving elective cosmetic procedures frequently demonstrate more postoperative anxiety than the female transsexual patient.

Sex-conversion operations have been available abroad on a "cash-in-hand" basis for many years. Numerous postoperative patients are available for evaluation and study, but the conclusions to be drawn from these retrospective analyses must be extremely guarded. Controlled scientific investigation of the transsexual problem is expected to clarify the nature of the disorder and, hopefully, indicate a more definitive course of management.

SUMMARY

This chapter provides a partial guide to the operative management of the female transsexual patient, with attention to the selection and timing of operative procedures and to the techniques found most satisfactory. Six female transsexual patients evaluated and treated in the Gender Identity Clinic of The Johns Hopkins Hospital constitute the basis for the report.

The interest of the plastic surgeon in the transsexual problem is concentrated on the technical challenge presented in the construction of aesthetically and functionally acceptable external genitalia. Construction of a vagina utilizing available penile and scrotal skin following penectomy and castration has proven entirely feasible. Creation of the male external genito-urinary apparatus is not accomplished easily and is fraught with serious hazards. It is necessary to pay attention to preoperative requirements, breast amputation, hysterectomy and oophorectomy, as well as to construction of male external genitalia.

FIGURE 1. A representative individual of the group of six female transsexual patients evaluated at The Johns Hopkins Hospital. Note the relatively diminutive stature. (Numbers mark centimeters.)

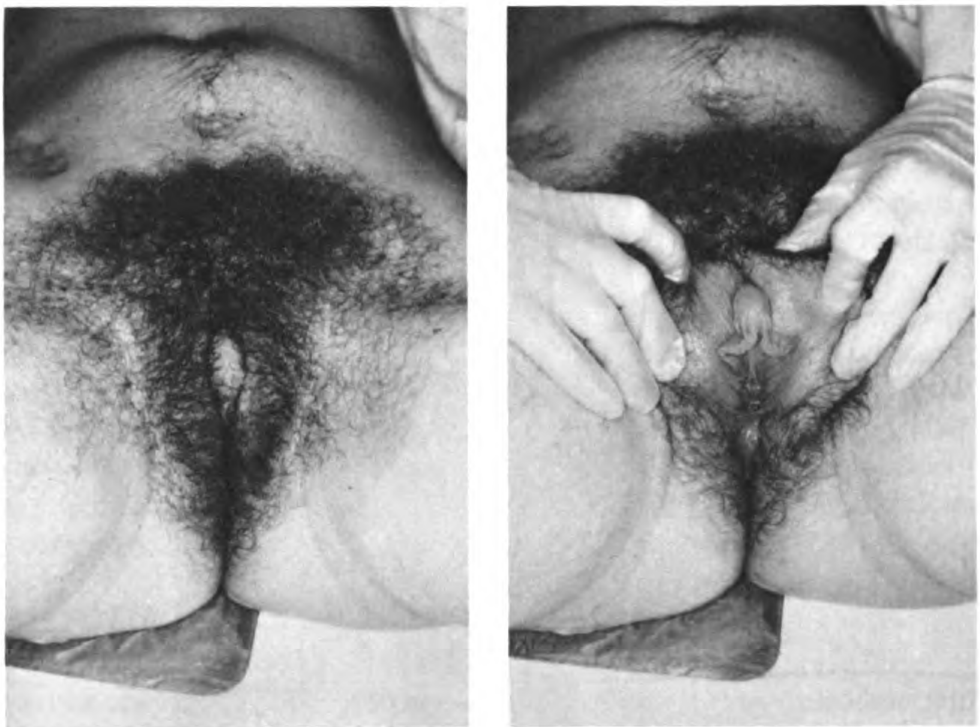


FIGURE 2. a) and b) Marked hypertrophy of the clitoris seen with the protracted administration of testosterone.

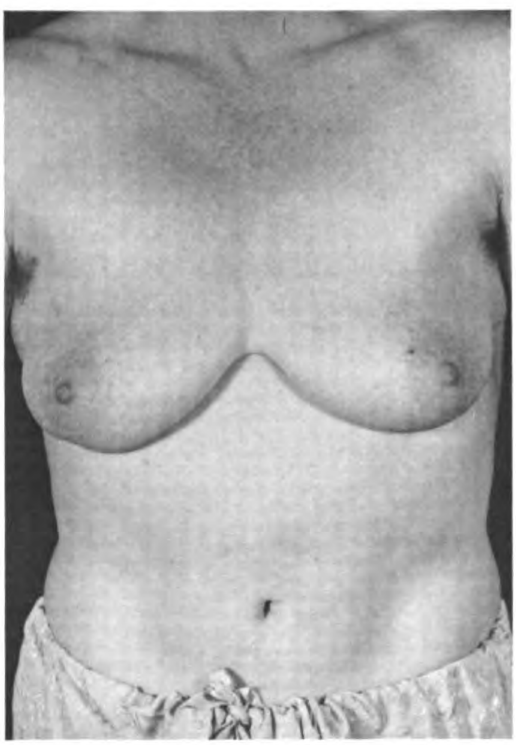


FIGURE 3. The breasts of a forty-eight-year-old female transsexual patient who has been receiving hormone therapy for a number of years. Testosterone administration apparently has had little influence on the breasts.

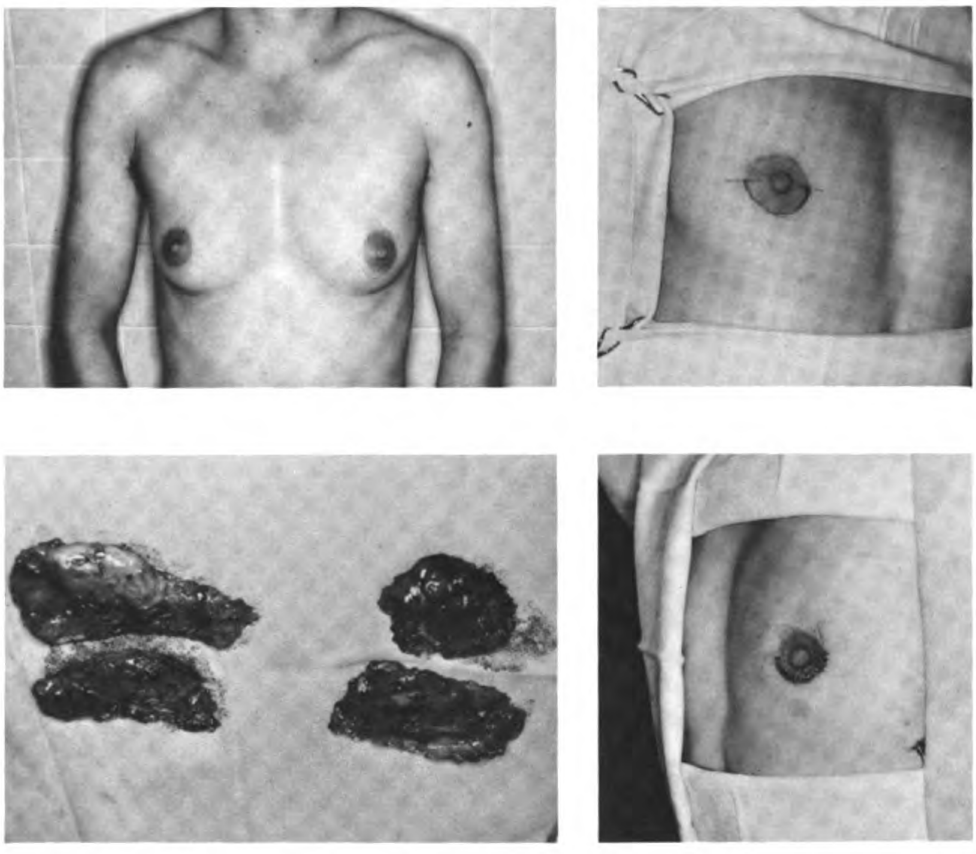


FIGURE 4. a) The breasts of a twenty-eight-year-old transsexual patient who has been receiving hormone therapy for several years.

b) The "gynecomastia incision" is outlined immediately within the margin of the inferior hemisphere of the areola.

c) A substantial quantity of breast tissue was removed through the "Keyhole" incision. Note that the tissue was removed as a medial and lateral half from each breast.

d) The immediate appearance of the breast following excision of breast tissue through a circumareolar incision.

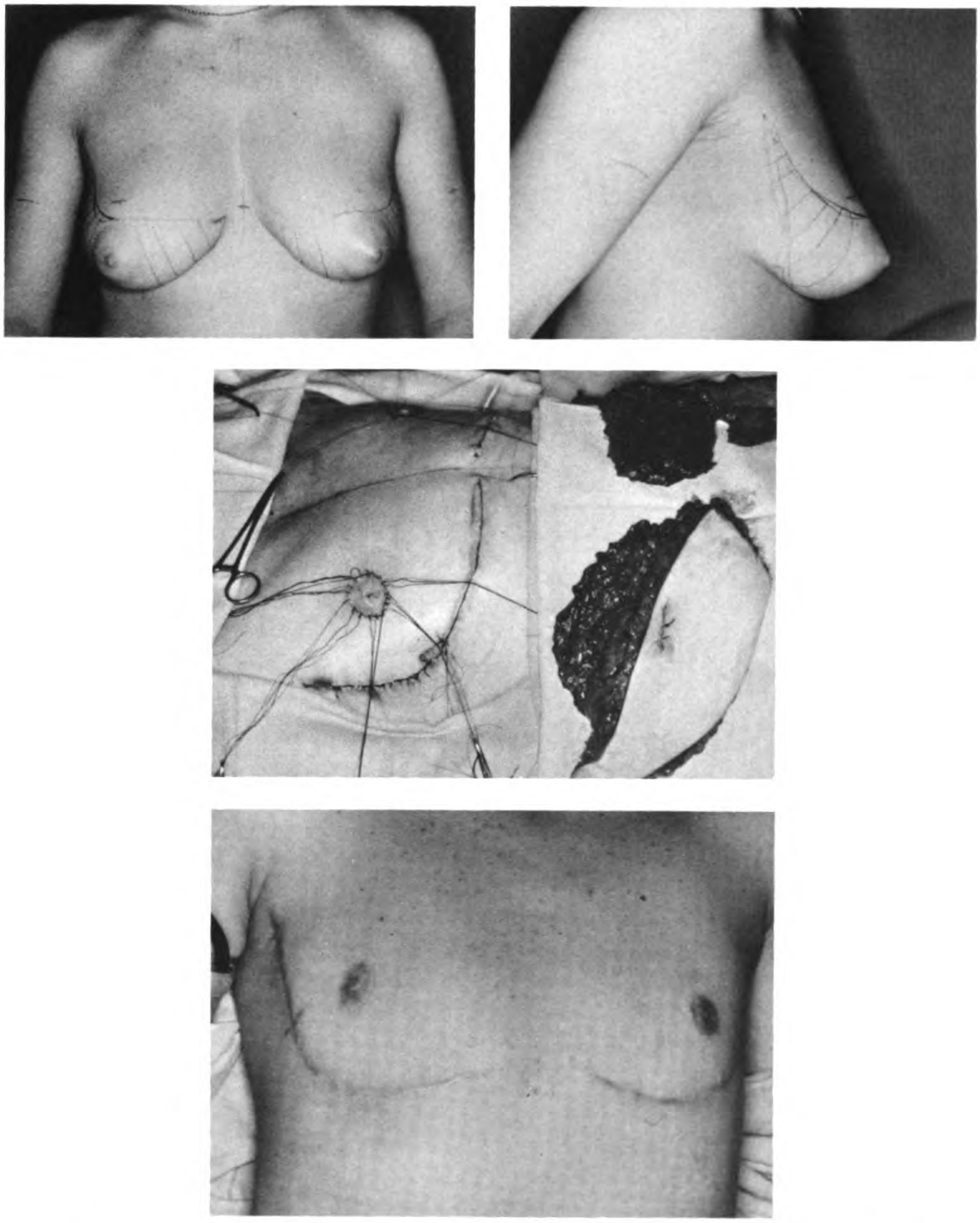


FIGURE 5. a) and b) Accurate preoperative marking is essential to the performance of breast amputation. The cross-hatched portion of breast is excised and discarded.

c) The line of wound closure following breast amputation overlies the inferior and lateral free margin of the pectoralis major muscle. Note that the nipple and areola have been removed from the specimen and sutured into the proper recipient location.

d) The appearance of the breasts at the time of utilizing labia minora full-thickness grafts to replace the nipples and areolae.

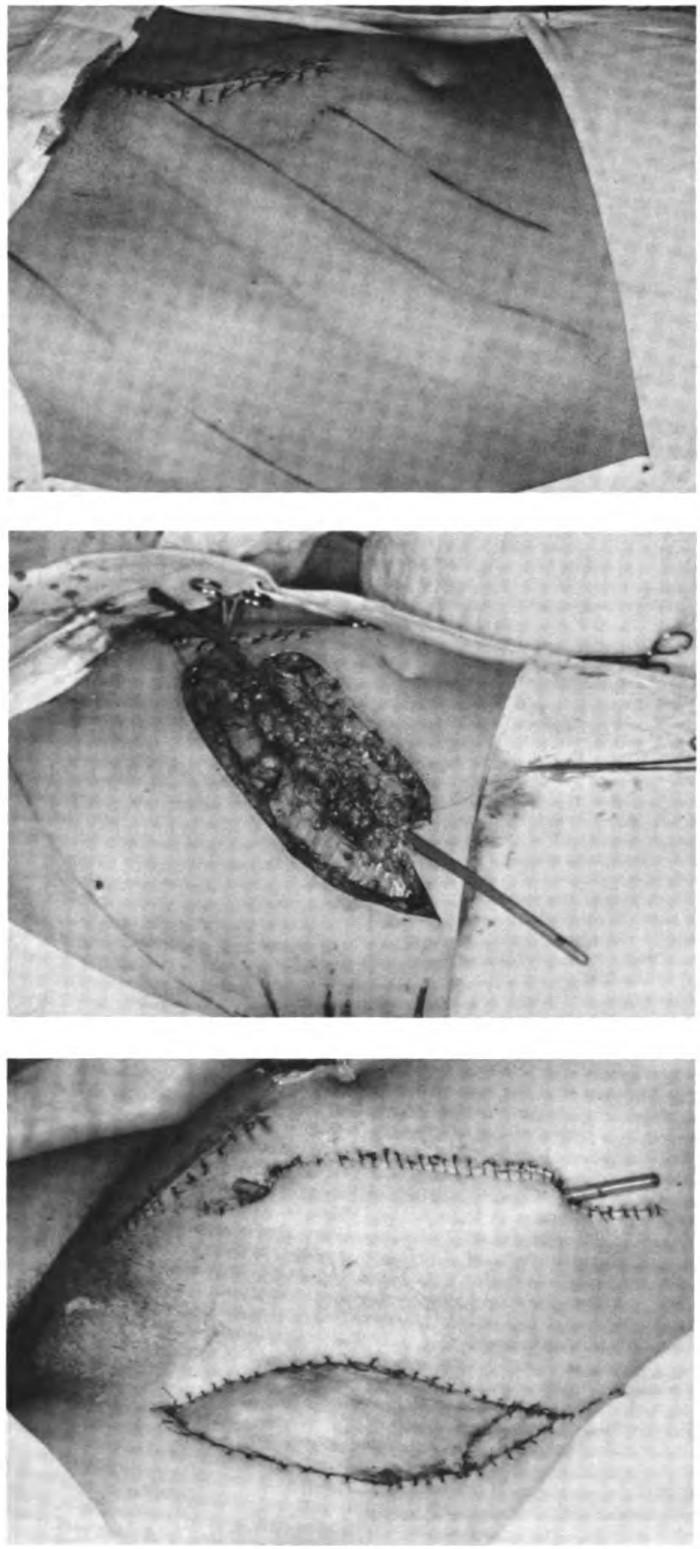


FIGURE 6. a) Hysterectomy has been performed through a lower midline abdominal incision. The incisions for the tube-within-a-tube pedicle flap have been outlined.

b) The abdominal skin destined to become the urethra has been partially undermined and tubed. A catheter lines within the lumen of this skin-lined tube.

c) The abdominal pedicle flap destined to become the phallus has been completely undermined, leaving superior and inferior pedicles, and advanced over the future urethra. A split-thickness skin graft has been applied to the donor area of the abdominal pedicle flap.

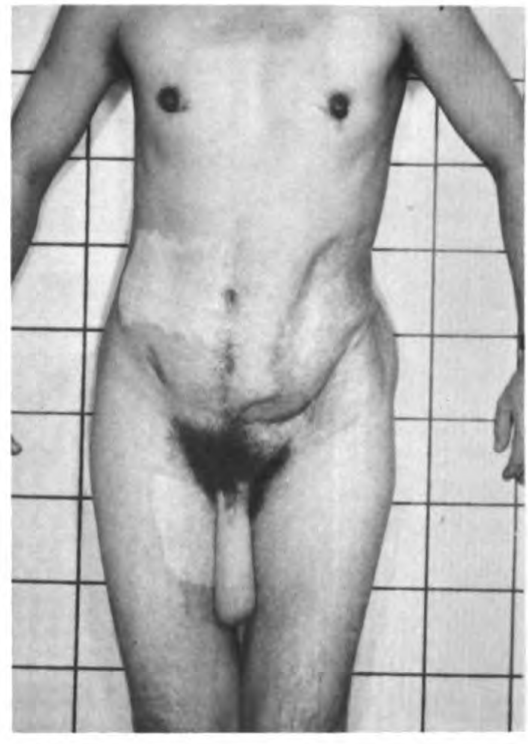


FIGURE 6. d) The abdominal pedicle flap together with the future urethra has been completely undermined between the superior and inferior pedicles, and the abdominal pedicle flap has been tubed so as to incorporate the urethra.

e) The superior pedicle of the abdominal pedicle flap containing the future urethra has been divided, and the superior pedicle has been implanted between the clitoris and the urethral meatus. Clitoral integument and sensation were preserved, and the clitoris was incorporated into the dorsal surface of the implanted superior end of the pedicle flap.

f) The inferior pedicle of the abdominal tube pedicle flap has been divided. The constructed phallus is in position.

APPENDIX TO CHAPTER 25

THERAPY FOR THE CONTROL OF POSTCASTRATION SYMPTOMS

Claude J. Migeon, M.D.

Almost all female transsexual subjects, like the male counterpart, have normal endocrine function, at least as far as our present function-tests are concerned. This includes normal gonadal function. It is therefore not surprising that hysterectomy and oophorectomy in the young female transsexual patient results in menopausal symptoms.

The Postcastration Symptoms

These symptoms are very similar to those experienced by many women during the climacteric.

Vasomotor and cardiovascular symptoms are frequent. The "hot flash" is characterized by a sensation of warmth starting in the lower part of the body and progressing upward to the chest, neck, and head. It may last for a few minutes and is often accompanied by a flush, particularly of the neck and face. Often, there is concomitant profuse perspiration. Some patients experience dyspnea and tachycardia which on occasion can be of the paroxysmal type. When these various symptoms occur at night they can keep the patient awake and bring about exhaustion.

Nervousness is another common symptom. Instability, irritability, and inability to concentrate are frequent complaints. Pounding headaches can also occur. The psychosomatic and psychoneurotic disturbances of the menopausal woman are often related to an acute anxiety over the process of aging, whereas those of the castrated transsexual are due to anxiety about the possibility of a complete sex transformation. In both cases, anxiety can result in a more or less marked depression.

Menopausal disturbances of the breast are not a problem for the transsexual patient who has already been subjected to a complete mastectomy. Although our experience is still limited, it is probable that

menopausal and postcastration osteoporosis will not occur in a patient who is committed to life-long therapy with androgens.

Treatment

Sedatives. Drugs can be useful for the relief of hot flashes. Bromide preparations (Paxarel®, Neurosine®) in small amounts are often effective. Barbiturates (Amytal®, Butisol®, Eskabarb®, Nembutal®) and tranquilizers (Compazine®, Librium®, Miltown®, etc.) in small, repeated doses can also be helpful.

If satisfactory improvement is not obtained by relatively small doses of sedatives, then the patient should receive hormonal therapy.

Hormonal Therapy. The administration of estrogen will result in a specific relief of the vasomotor symptoms very promptly.

The main oral preparations are a synthetic compound, diethylstilbestrol (0.2 to 1.0 mg. per day), and a natural conjugated estrogen, Premarin® (0.625 to 2.5 mg. per day). Diethylstilbestrol is the least expensive, but it increases the pigmentation of the nipples, genitalia and various points of friction of the skin; it also produces nausea, whereas Premarin® seldom, if ever, does.

Long-acting intramuscular preparations can be useful in patients who dislike the tediousness of the daily intake of an oral drug. These preparations are: Delestrogen® (20 mg. every three weeks) and Depo®-estradiol cypionate (2 to 5 mg. every three weeks).

The estrogen treatment should be maintained for three to six months, at which time the dosage of hormone should be reduced to about one half and eventually stopped completely. The duration of the therapy will be a function of the subjective improvement of the postcastration symptoms.

In most cases, the patients have been started on androgen therapy prior to castration and are maintained on this treatment after surgery (testosterone enanthate, 100 to 300 mg. intramuscularly, every three or four weeks). It is of interest that male hormone does not alleviate the disorders resulting from oophorectomy.

Psychotherapy. The transsexual patient requires supportive therapy throughout the period of sex change and needs considerable attention at all major stages of treatment.

CHAPTER 26

PREOPERATIVE AND POSTOPERATIVE STATUS OF MALE AND FEMALE TRANSSEXUALS

John Randell, M.D.

In ancient Syria, according to Lucian in *De Dea Syria*, the novice priests of the Gallae traditionally castrated themselves with swords during the rites of the Goddess Astarte when they dedicated themselves to her in states of extreme excitement. Following the autocastration, they ran in the streets of the town carrying the severed genitals, which they threw into the doorway of any house which took their fancy. In return for this doubtful gift the novice obtained from the householder female clothing which he thereafter wore as a full-fledged priest. Lucian infers that they lived thereafter contentedly in a socially accepted female role although their basic male sexuality was known to all (Lucian, translated by Strong, 1913).

This chapter tries to examine and assess the success or failure of surgical treatment in a series of transsexual patients who underwent sex-reassignment operations. Do they, like the priests of the Gallae, live happily ever after? Do they achieve the same level of acceptance and satisfaction after surgery? Are the surgical interventions justified by the results or should those who have "passed" into the opposite gender role be persuaded—if that is possible in these compulsive and obsessed individuals—to be content with social acceptance in their "passed" gender role without surgical intervention?

Clearly, a hard core of transsexuals will refuse to accept a status which leaves them with their external genitalia. With compulsive drive they pursue their goal of surgical remodeling of these sexual characteristics, in the pattern of an obsessional/compulsive neurosis. One must pose the question: "Are they ever content with the level of postoperative function imposed by the limitations of anatomy and of surgical techniques? Might not they wish to conceive, suckle, and rear children of their own?" From even a rudimentary knowledge of biology the

majority of those seeking sex reassignment know that such functions are not possible—although a few quasipsychotic transsexuals have overvalued ideas, nearly amounting to delusions, in which they believe that these physiological attributes are attainable. There is a real danger that after even the most skillful plastic and urological surgery the patient will be dissatisfied with the final result and its obvious limitations and continue to regard their ultimate goal of complete cross-sex identification as unattained and their life purpose still unfulfilled. In order to determine whether such surgery is justified, it is proposed to examine the results of thirty-five cases of operations on transsexuals (twenty-nine males and six females).

Review of Past Findings

Apart from historical accounts of ritualistic castration,[1] reports of deliberate surgical castration are rare although there have been reports of males being castrated legally for sexual offenses; Karpman (1954) states that castration for sexual offenders is possible in thirty of the United States of America; he also cites papers published on the effect of castration in males. His book includes a statement by C. D. J. Generales to the effect that "Surgical revision and plastic operations on the genitalia have a definite place in the treatment of the transvestist." Hamburger and associates' report on castration and sex reassignment (Hamburger, Stürup, and Dahl-Iverson, 1953) is perhaps the best known recent publication relating to this problem. It describes a typical transsexual who underwent hormonal treatment with estrogens and bilateral orchidectomy. A year after castration, penectomy was performed on the grounds that continued possession of the penis constituted a "mental load" on the patient. Plastic surgery to give the appearance of labia was also performed. The authors do not comment on the mental state following the operation, but merely assert that the patient would be able to move freely in society without being suspected of not being a woman.

A further paper from Sweden (Hertz, Tillinger, and Westman, 1961) reports five cases (two males and three females) also treated by hormone and surgical intervention. Penectomy and orchidectomy were performed on the men, one of whom had a vaginoplasty which was not successful

[1] For example, autocastration occurred in the rites of the Phrygian goddess Amma (Agdistis) in which it was customary for young men to emasculate themselves with sharp shells. Similar rites are reported among the Phoenecians and self-mutilation also took place among the ancient Mexican priests. Enforced semi-castration at the age of eight was a feature of some Hottentot and indigenous Australian tribal customs (Gould and Pyle, 1958).

The Skoptsy, a fanatical religious sect in Russia, were prone to indulge in self-mutilation as a means of achieving purity of thought untrammeled by sexual overtones and were compelled by the authorities to parade the streets dressed in women's clothes—a form of imposed transsexualism—in order to discourage others from following their example (Encyclopaedia Britannica, 1949). For a more complete historical and cross-cultural discussion see Chapter 1 by Green.

although the patient declared himself better adjusted. The other male, a homosexual prostitute, was not given a vagina and, after initial mental improvement, he later developed depression caused, it is suggested, by the difficulty in adapting to the new gender role. The three females had hysterectomy and bilateral mastectomy. Two married girlfriends, although one was later divorced and suffered attacks of depression, a disorder from which she had suffered before operation and which was possibly a constitutional affliction. All these women claimed to be improved, on balance, following their defeminizing operations, and did not regret having had them.

Bowman and Engle (1957) presented a paper on the medicolegal aspects of transvestism in which they rejected surgical transformation procedures for transsexuals on the ground that this would play into the patient's illusions and would not solve the problem. Nevertheless, they describe the case of a forty-three-year-old male, working as a practical nurse, who castrated himself by removing both testicles. As he was wholly impotent and because it was feared that he might repeat his attempt at surgery, penectomy was performed. Two years after penectomy he was found to be feeling more comfortable and making a fair adjustment.

These sparse reports are greatly overshadowed by the work of Harry Benjamin who has followed a much larger number of transsexuals through operative procedures. A preliminary report (1964a) related to thirty-one male patients who had undergone operations. Penectomy was performed in all cases; castration was undertaken in twenty-three cases; in the remaining eight cases the testes were placed in the retroperitoneal tissue in the same position as undescended testicles. Most had some level of plastic reconstruction, the scrotal skin being used to fashion the labia majora and the skin of the penis being used in some cases to form the labia minora. Twenty-five patients were given an artificial vagina, lined with a skin graft. In four cases the penile skin was inverted and placed into a cleft behind the prostate gland. Four others had a simple mechanical invagination.

Benjamin claims that the results of such operations were "excellent" in sixteen cases, "satisfactory" in eleven cases, "doubtful" in four. The level of success was based upon an assessment of physical health, emotional state, and social status in the new role. His patients stated that they were able to have satisfactory sex relations and most claimed that they experienced orgasm on occasion; Benjamin relates this capacity to the psychological effect of assuming the female role. The foremost ambition of converted transsexuals was to marry and thus complete the affirmation of femininity within the biological limitations. If marriage was not feasible, prostitution became a substitute; being accepted as a woman by normal heterosexual men provided a confirmation of feminine status for the "converted" transsexual.

Benjamin later (1966) published a larger series of transsexual cases and

gave some personal data on the fifty-one cases who have had "sex-conversion" operations. The operative techniques used were similar to those employed in his earlier series of cases (the two series overlap) although he states that in two cases a loop of ileum was removed to form the vagina. Most of his patients came from the middle social/educational levels of society, and the majority were in clerical or semi-skilled occupations, including professional theater. In most cases, the transsexual inclination had dated from early childhood. Benjamin found a gender motive present in twenty-eight cases and a sexual motive the leading motivation in twenty-three cases, although there was not always a sharp division between these two categories.

Assessment of postoperative adjustment was made and was considered "good" if the total life situation was successful, with good integration into the world of women and acceptance by society and by the patient's family—seventeen cases (thirty-three percent). If the result lacked any one of these features, including the ability to experience orgasm the result was only considered "satisfactory"—twenty-seven cases (fifty-three percent). Where appearance and sexual function were unsatisfactory, despite relief from unhappiness in the male role, the result of the operation was designated "doubtful"—five cases (ten percent). Only one patient was regarded as having an unsatisfactory result (a patient whose operation Dr. Benjamin did not endorse). The postoperative result was known in one further case. Benjamin gives very scanty information about the postoperative mental condition, but does comment on postoperative handicaps, especially the closure of the vagina. Ability to experience orgasm was reported by more than half of these patients and was accompanied by urethral discharge. Benjamin also cites as a common complaint an inability to consummate sexual intercourse, due to such varying factors as atresia of the constructed vagina, a narrow introitus, a thin vaginorectal septum, and vaginal bleeding after coitus. All Benjamin's patients received estrogen therapy as a routine procedure before operation, in order to stimulate the growth of breast tissue and to reduce male libido. Of his fifty-one postoperative patients, twelve married as women, five were divorced as females and three remarried one or more times (this argues for an unsatisfactory postoperative adjustment).

Benjamin also reports on the surgical procedures undertaken in the case of twenty female transsexuals. Nine had achieved hysterectomy and five of these also had mastectomy. Five other women had mastectomy alone. Most of his female patients also had androgen therapy. The results of surgery in female transsexuals is claimed to be good. Seven of the hysterectomized patients had a good result; one changed her mind and reverted to female status and the result in one case is unknown. Six of the converted women married as men and at least one adopted children as an adoptive father.

These apparently satisfactory results of sex-change surgery are not endorsed by all authorities, some of whom regard those who seek sex change as suffering from psychosis or neurosis. This view was expressed, for example, by Clarkson and Stafford-Clark (1960) and Ostow (1953).

It appears that the writers who report satisfactory outcome of sex-conversion operations make an effort to exclude psychotic patients from their series. It is also the present writer's experience that those with psychotic conditions do badly after such operations.

Twenty-Nine Male Transsexuals

Preoperative Status

The results of operations undertaken on twenty-nine male transsexuals are to be presented here. All were classical transsexuals, with typical obsessional drive to seek sex-conversion operations. In all cases, the motivation for surgery was strong and of compulsive quality. The compulsion to cross-dress seen in transvestites is also obsessional, although it has a fetishistic quality, even in the so-called asexual type of transvestite who shows little or no sexual drive. Some transvestites are not fetishists and these are homosexuals who adopt the cross-sex clothing in order to attract members of their own sex or to advertise their proclivities. In some cases, however, the desire for sex-conversion operation grew out of formerly established homosexual orientations, although these homosexually oriented individuals had felt the characteristic conviction of belonging to the opposite sex from an early age.

It seems reasonable to designate as compulsive obsessionals those transsexuals who follow through their conviction of cross-sex identity to the point of seeking and achieving a sex-conversion operation. Probably many other transsexuals live with a conviction of cross-sex identity without the compulsion to seek an operation, or if they do wish for surgery, they lack the drive to pursue and implement their wishes. Some individuals of this type remain simple transvestites with transsexual inclinations; another group is prepared to live in the cross-gender role of a homosexual partner to one individual or to a series of individuals if they are promiscuous or homosexual prostitutes. They may continue to desire sex reassignment without taking steps to implement the wish. Those who achieve their aim of the sex-conversion operation display compulsive/obsessional characteristics which drive them towards their goal. Like other types of obsessional-compulsives, they tend to persist in their compulsive strivings even when their initial goals are attained, and there is a tendency to seek endless modification of their surgical end-result, a drive to marry in the adopted gender role, and even a wish to conceive. This ultimate desire, being unattainable, provides the focus for the obsessional rumination which all obsessionals have. How-

ever, some transsexuals seem willing to compound their desires for as thorough an identification with the opposite sex as their impersonating skill and the current surgical ingenuity can provide. Although they are never fully satisfied, they subside into a more or less complacent adjustment in their new role.

Sexual Orientation Prior to Operation. Three men were in Kinsey Group Two. All three had been married and two of them had fathered children, but both were divorced and had been living as women for several years prior to referral. One of these Kinsey Group Two men had been interviewed some sixteen years prior to operation, when he was still married. His orientations were then mainly heterosexual and at that stage he was a transvestite. His later presentation as a passed transsexual desiring castration and penectomy was coincidental, but his case demonstrates the fact that some transvestites do progress toward transsexualism rather than homosexuality. He asserted that he would not entertain sexual relations with other men while he possessed the male genitalia—but after operation that he might allow himself to be courted by men when he was "properly a woman." This was a common attitude found in non-homosexual transsexuals in a larger group also studied by the writer. Their attitude might be designated as homosexual, although they had never practiced as homosexuals. Many had been intimate with and were attracted to women rather than men as far as their overt attitudes were concerned. These men were rather lacking in libido and had never enjoyed sexual intercourse with their wives although two of them had apparently fathered children; paternity was disputed in one case.

The sole male in Kinsey Group Four had experience of intimacy with females but preferred male partners. He too was rather lacking in sexual drive and was a passive individual. Following the administration of estrogens, his sexual drive towards women had weakened and he had drifted into more frequent sexual relations with males in the passive role.

An overwhelming majority of the males who were eventually selected for castration fell into Kinsey Group Six. It is understandable that those who wish to function completely as females also wish to identify themselves with the female sex role, and that in this sexual role they desire sexual relations with males. For eleven of these exclusively homosexually orientated men, the desire for operation sprang from the wish to regularize their position as cross-dressing homosexuals and the sexual partners of individual males. They wished to be women so that they could function more completely as women and be recognized by society as the wives of their male partners. Many of them aspired to marry their partners, and despite the doubtful legality of such unions, one of them actually went through a marriage ceremony. As long as they still possessed male genitalia, they felt incomplete as women and were

conscious of themselves as males. They felt that after castration they would be women and therefore no longer homosexual. This thought tended to concern them even when they claimed that they were and had always been women.

The eleven other men in the Kinsey Group Six were mostly promiscuous homosexuals or latent homosexuals. Several had frequent associations with men, possibly on a "call girl" basis, and they tended to associate in coteries. Two were frankly prostitutes, known to the police for prostitution or other petty crimes but neither of these was recommended for surgery by the writer. They were considered antisocial, unstable and psychopathic, and likely to find themselves involved in further offenses. Others had passed into the female gender role without making much if any contact with males and lived the life of a chaste single woman, but with fantasy of sexual relations with men, so they were homosexuals psychically and their preferences qualified them for inclusion in Kinsey Group Six.

One man was difficult to fit into the Kinsey rating as he was attracted neither to men nor to women—he just wanted to be a woman. He had not had sexual experience beyond adolescent masturbation, with fantasies of being a woman. He had received estrogen therapy but this had only depressed his already low sexual drive still further.

Age Range at Referral. Table 1 shows the age range at referral. The majority (nineteen) of these twenty-nine men were in their third decade when their impulsion towards sex reassignment brought them to psychiatric notice. Although the conviction of cross-sex identity had been present in most cases from before the tenth year of age, social circumstances and social pressures prevented them from verbalizing their problem until the third decade. Ignorance of the facilities was one factor and it is probable that many were given the impetus to pursue their quest by newspaper publicity surrounding other transsexuals. Some moved in cliques with other transsexuals who shared their knowledge of facilities and contrived to make their general practitioners refer them to physicians known to be interested in their problems and sympathetic to their aspirations. They were often in the same age range because of a former association in all-male theatrical revues.

Ten men did not present themselves for assessment until the fourth decade of their lives; in such cases the decision to pass into the female

Table 1
Distribution of Male Transsexuals According to Age

Age Range	Number
21–30	20
31–40	9
41–50	—

gender role had been deferred for reasons relating to their personal circumstances or because of ignorance of the medical and surgical possibilities. Difficulties in establishing themselves gainfully in the female role often caused postponement of psychiatric consultation and assessment. Some had worked out a planned approach to sex reassignment and this often involved a slow modification of their social patterns and employment with the operation as the final step in their quest for medical assistance. In at least three cases, married men had to disembarrass themselves of wives before they could follow their final path towards consultation and operation.

Thus for a variety of reasons, not the least being the slow establishment of a firm conviction that the opposite gender role was more appropriate to their inclinations, these men delayed their search for help with their gender-role problem until their thirties or forties. The one exception was a professional prostitute (whose operation was not recommended by the writer) who was actively engaged in a variety of sexual activities, including flagellation. This man had been married and had a child but was later divorced by his wife and lived for some years thereafter as the "mistress" of a professional criminal.

It can be said that these transsexuals had adequate time to reach a firm decision about seeking surgical conversion. Their request was no mere whim or hasty decision, but a conclusion reached, with few exceptions, after they had passed into the female gender role in which they could experience the problems and disadvantages of living as a woman. The duration of this period ranged from eighteen years to nine months before operation.

Social Class of Males and Females. Table 2 shows the distribution of the patients into social classes. In general, the male section follows the pattern for the population at large, but the sample is too small to allow accurate comparisons to be made. A large proportion came from semi-skilled and manual labor classes and previous occupation as a waiter or waitress was a frequent finding as an unskilled occupation which could be taken up by a newly emergent woman. Nine men had worked as female impersonators—a calling in which they had exercised their ability to pass in the female gender role. This is a semi-skilled occupation but two had reverted to unskilled employment as waitresses. One man was employed as a female companion to two old ladies. In social class III, one was the manager of a wholesale business, two were clerks, one a design artist, and another a lodging-house keeper. Two had university degrees and one was practicing in a major profession. The change of gender role was naturally attended by some publicity as this patient continued in the profession that he had followed as a man. Another patient has a degree in oriental languages, but prefers to work as a student dress designer.

Criminal Records. Six men had previous convictions for criminal

Table 2
Distribution of Transsexuals
According to Sex and Social Class

Sex	Social Class				
	I	II	III	IV	V
Males	1	1	6	13	8
Females	1	2	—	1	2

offenses. In three cases these were for homosexual offenses and were not regarded as obstacles to operation as the individuals concerned had abandoned their promiscuous pattern of life and lived with a stable homosexual partner long enough to indicate relative stability of personality.

Three men had convictions for theft and one of them also for keeping a disorderly house. None of these men was recommended for operation by the writer because they were considered too unstable and psychopathic for this procedure. They sought recommendation for operation by other doctors.

Abnormal Physical Findings. One man had developed spontaneous gynecomastia in adolescence which he felt confirmed his cross-gender orientation.

Most of the twenty-nine men reviewed here had received estrogen therapy prior to operation, which resulted in various degrees of gynecomastia. In some instances bust development was quite pronounced, but in most cases it was of moderate degree.

Psychiatric Conditions Found Prior to Operation. Five men had shown psychopathic and antisocial propensities prior to operation. In one case these were mild and not considered a barrier to recommendation for operation. In another case the record of antisocial promiscuous behavior was concealed prior to operation and became apparent only after penectomy and castration were performed; had this patient's record been known, he would have been refused operation.

Three other psychopaths with known criminal records had their castrations recommended by other doctors; they were considered unsuitable for surgical intervention.

Nine men had developed depressive illnesses of varying degree before operation was undertaken. In most cases these depressions were of reactive type. Frustration in the male sex role and inability to achieve the sex-change surgery were factors in the precipitation of the depression. In one case the depression was so severe that electric shock therapy had to be employed for its relief. Three men relapsed into depression after the operation and two of these committed suicide; their preoperative depression appeared to be reactive to frustration rather than to endogenous factors. Neither of these men was recommended for operation by the writer. They were regarded as too unstable but both

managed to persuade other psychiatrists to refer them for castration and penectomy.

Age Range at Operation. Table 3 shows the age range at operation and indicates that the patients were significantly older when they came for the operation than when they were first seen. This is because in general they were observed for some months, or even years, before the decision was made to recommend them for surgery. Consideration is given to whether these individuals can support themselves and pass as women in the environment without suspicion and detection, and show that they are better adjusted in the female gender role than as males. Where it was patently clear that they had fulfilled these criteria for some period before referral, the waiting period was shortened. In some cases the operation was deferred because patients had to wait for hospital vacancies; surgeons are reluctant to fill their available beds with such cases and prefer to space out the admissions for such surgery. Three patients had to wait for a favorable outcome of divorce proceedings; married men are not considered suitable for castrating operations in view of possible legal actions which might attract unwanted publicity.

Table 3
Distribution of Male Transsexuals According to Age at Operation

Age Range	Number
21–30	16
31–40	11
41–50	2

In one of these cases a period of sixteen years had elapsed between the first referral, when the patient was serving in the armed forces and was then a married transvestite, and a later referral for consideration of surgery, at which time he had been living for some years as the female companion to an older woman. In this instance, the long gap was due to divorce proceedings and a slow conversion to transsexual attitudes; these attitudes were well established at the second referral and operation seemed indicated as the patient had found acceptance as a woman despite physical attributes which detracted from a wholly feminine appearance.

Gender-Role Orientation Before Operation. All these males showed the classical transsexual orientation and attitude. Commonly they had identified themselves with the opposite sex; the games, dress, and status of girls were objects of their envy from an early age. Cross-dressing in childhood was a common feature; only two men in this group claim that they had not cross-dressed before operation, but one of them admitted to taking a female part in a theatrical production during his male existence. Many were homosexual in orientation and their desire for female status stemmed partly from this. All except two males had

passed into the female gender role and were living and in most cases working as women prior to operation.

Naturally, these patients were dissatisfied with their masculine status and longed to be veritable women. Some had paradelusions of being actually females and saw the operation merely as a method of correcting an abnormal physical conformation. There were various degrees of insight into the true state of affairs. The more intelligent ones were aware of their basic masculine anatomical and chromosomal structure and were prepared to accept that they could not be transformed into veritable women. Nevertheless, four men had varying degrees of delusion over their sexual status. One—a professional worker who certainly should have known better—claimed the possession of an undeveloped uterus discovered at laparotomy, although he possessed normal male primary sexual characteristics before operation. Three others had always considered themselves as fundamentally female in mental orientation and regarded the evidence of their male genitalia as an anatomical anomaly, although one of them was even the father of a normal son. The characteristic transsexual conviction of a female mind in a male body was a common assertion, and these three men had pursued the conviction of female status beyond the simple wish-fulfilling concept with retained insight into basic male status.

Racial Factors. Two men were full-blooded Chinese from Singapore who had cross-dressed as female impersonators from an early age. Another was half American, half Chinese and was also a female impersonator of the more ostentatious type. Among the British transsexuals there appeared to be a tendency for these subjects to have been reared in North Country and Midland towns. In some Northern cities there is a tradition of transvestite and transsexual coteries, although they are also to be found in London.

Nuclear Sex. All the males were cytologically chromatin negative.

Psychological Attitudes Prior To Operation. Many of these men were so effeminate that they could not pass as men without drawing attention to themselves as sexual oddities. As women, all of them were more congruous and acceptable. All were dissatisfied with their physical state, although all except two had passed into the female gender role and were accepted by society as women, albeit with slightly varying degrees of credulity; several were somewhat suspect by virtue of tall stature, big hands and feet, and gruff voices modulated on a male level. Surprisingly, one man who continued to live as a male up to the time of operation made a very passable, even attractive woman. He asserted that he *knew* that he would be able to pass as a woman and needed no experience in cross-dressing or passing before operation. The dissatisfaction with their state centered around the continued possession of the male genitals. Many felt themselves to be psychologically women, and regarded their male organs as an anomaly and an unwanted reminder

of the disharmony between their mental attitudes and their physical conformation. They actively hated these male genitals, were disgusted by the sight of them, and their continual desire was to rid themselves of them. As one patient said: "I just want to get rid of these awful things between my legs." Some deceived themselves into believing that the organs had a noxious effect and that they caused actual pain and discomfort; these men felt unwell and their genital region was to them a seat of disease as long as they possessed male organs. Such ideas are, of course, rationalizations of mental attitudes because a normal organ cannot cause discomfort. It may be that the constricting garments worn to suppress and to conceal the penis and testes caused some discomfort and this was emphasized by several men who complained of chafing and maceration of skin surfaces produced by the apposition of the organs to the perineal skin. The constant reminders of their maleness necessarily occurring during excretory activities and bathing were also a source of distress.

They were also insecure in their passing through a constant fear of the detection of their true sexual status by accident, such as injury, unforeseen admission to hospital, or unsolicited sexual exploration by male companions. They felt that they had to be on their guard all the time. The difficulty inherent in hospital admission is a real hazard. One of my transsexual patients was admitted to a female ward (with a deep vein thrombosis) and was transferred to a male ward to his considerable embarrassment and chagrin when a surprised woman house physician discovered his male status. Other passed transsexuals apprehended for various offenses have found themselves in men's jails, to their great discomfort, especially when they have to endure the unwanted sexual attentions of their fellow prisoners. The constant fear of discovery as a male may induce marked anxiety reactions even to the extent of an anxiety neurosis in addition to the compulsive-obsessional pattern shown by all these men. It is surprising that some male transsexuals consider themselves to be wholly women despite retention of male organs—a form of self deception by "logic-tight" thinking rather than a true psychotic delusion.

Frustration of their aspiration to achieve castration led these patients to depression and distress. Such reactions were common and resulted in six cases of suicidal attempt. Suicidal feelings were commonly encountered. Anger at delay in achieving surgical assistance was another frequent reaction to the unsympathetic treatment meted out by most medical practitioners and by many psychiatrists. The reluctance of most surgeons to carry out castrating operations also cause annoyance and frustration.

Even when offered the hope that something may be done to help them, transsexuals express impatience with any postponement and resent particularly any probationary period during which assessment may be

carried out. They interpret any waiting period as a shortening of their life span in the female role. The very compulsiveness with which they pursue their quest causes them to become impatient more quickly than normal individuals of delay or opposition to their endeavors. This compulsive striving produces importunity and badgering of their medical advisors in a manner which is liable to stiffen resistance to their demands and so increase their frustration at delay. Not one among this group considered reverting to a male status; they all stated that they would prefer to commit suicide than continue life in the male role.

A feeling encountered among these transsexuals is the feeling of basic incompleteness in the female role. As long as they retain the male genitalia these men see themselves as anomalous and bogus. They resent having to equate themselves with transvestites, whom they despise, although often they have passed through a transvestite phase themselves. Some feel a sense of guilt in passing themselves off as women while they have the male organs. Others feel that the organs induce in them a feeling of inferiority in their role as women. They demand that operative intervention be undertaken to make them into the true woman they feel themselves to be; until this is done, they argue, they cannot feel "genuine" or move freely in society as women. They always have the uneasy consciousness of having a masculine body beneath their feminine finery—a constant reminder of their inability to claim female status. They believe that they could claim such status if the genitals were removed and they usually convince themselves to ignore the actual neuter status which is the real effect of demasculinizing operations, no matter how much plastic surgery may be carried out on their bodies.

In order to understand the transsexuals, one must realize that theirs is a sense of being merely in transition into the female gender role: having opted to pass, they must complete this transition. They wish to be female and, to fulfill this aspiration, they have to persuade themselves that this will be the effect of surgery. If forced to face the reality that they can only end as neutered, feminized males, they agree reluctantly that this must be the case but in their minds they continue to foresee a complete female status for themselves. To this end they seek emendations to birth certificates, an untenable request in my view,[1] for I do not subscribe to the opinion that a phenotypic male can have a female psyche. Those who profess to have such mental orientations are in fact anatomical males with obsessional beliefs or over-valued ideas that they are female; and therefore psychiatrically abnormal. If they have passed into the female gender role it seems reasonable to recognize their social status by the issue of employment cards, driving licence, passport in a female status, but it is not possible to certify that they were wrongly

[1] For a different point of view, see Introduction by Benjamin and Chapter 29 by Holloway [Editors].

described as male at birth, unless they are anatomically pseudohermaphrodites. Only on such grounds can birth certificates be emended. All the transsexuals here described were anatomically normal males.

On the factors outlined above and the ability to accept difficulties and delays involving the desired surgical intervention depend the level of adjustment attained by the passed transsexual awaiting operation.

Associated Psychiatric Findings. The presence of psychiatric disability, in addition to the basic obsessional-compulsive orientation of these transsexual patients, was also of importance in determining the level of social adjustment necessary before operation. In some cases, depressive patterns were reactive to the frustration and difficulties of preoperative anatomy, but fourteen men showed predisposition to psychiatric illness irrespective of their transsexualism, as they had family histories of psychiatric illness (four cases) or evidence of previous neurotic traits and disturbed childhood patterns amounting to psychiatric disability (ten cases).

The presence of neurotic traits in childhood may have contributed to later maladjustment in the gender role assigned at birth and have caused neurotic tendencies in relation to the gender role in adolescence, especially if one accepts the thesis that these individuals have an obsessional neurosis, or at least an obsessional component which drives them to pursue the change-of-sex goal. Similarly, a family history of psychiatric illness may predispose the individual to anomalous patterns in later life, but such family histories were found in only four cases and, therefore, do not appear to be significant in the present series. This may be due to care in selection of candidates for treatment, thus eliminating the more unstable transsexuals as unsuitable for operation, for in a larger series (one hundred and sixty) of cross-dressers studied by the writer, nearly forty percent had a family history of psychiatric illness and fifty percent had a personal history of neurotic traits in childhood. However, not all of these men were established transsexuals.

The Preoperative Adjustment. Varying degrees of preoperative adjustment to the life situation were evident. Twelve men had a "poor" adjustment—that is, they had difficulty in being accepted as males and even after they had passed into the female role, they were in conflict with society over their status and their employment. They were unhappy, depressed, and neurotic; life was difficult for them and several had hospital admissions for treatment of problems related to sexual status. Thirteen had made "fair" adjustments in the female gender role. They were accepted as females and managed to live tolerably comfortably in relation to society. Most of them were employed, but they were unhappy in the continued retention of their genitals and lived in constant fear of detection and unmasking as males. Four were in "good" adjustment to their environment and their remaining problem centered on the possession of genital organs. In all other ways they were at ease in

Table 4

Psychological and Social Preoperative Adjustment of Male Transsexuals

Adjustment Category	Number of Patients
Excellent	—
Good	4
Fair	13
Poor	12

society, but sought operation as a means of completing the transition into the female gender role. They felt that operation would make them more acceptable as "real" women.

In the assessment of these degrees of preoperative and postoperative life adjustment the following criteria were followed: *"Poor" adjustment:* The subject was in conflict with his environment, distressed and often showing active anxiety and depressive patterns. Depression was often severe, and suicidal thoughts were present or suicidal attempts had been made. The subject was usually unemployed and relations with family and the immediate social environment were poor. The situation produced tension and distress. *"Fair" adjustment:* The subject had come to terms with his environment to some extent, was supported by his relations and friends, and accepted by society as a female, although the individual himself was still overconscious of his basic male status. Some men in this category were employed and self-supporting. *"Good" adjustment:* The subject in this grade was usually confident and comfortable in the female gender role, had established good relations with society in that role, and was accepted by family and friends as a woman. Almost without exception they were employed and/or living quietly as "wives" to male partners with whom a fairly satisfactory sexual relationship had been established. They were accepted as females, but they desired operation so that they could enjoy greater security, freedom from detection as passed males, and a more complete sense of identity as females. *"Excellent" adjustment:* Transsexuals in this category felt that they had achieved female sexual status in the eyes of the world; they felt that their body conformed more or less to the female phenotype. Sexual relations using an artificial surgically constructed vagina was an ideal desired by some of them, while other patients who had only simple castration and penectomy were in this category because their assimilation into the female gender role was so adequate that their social adjustment was excellent. In some cases, sexual self-expression was not valued highly or other forms of intercourse were employed to meet the demands of the partner. The transsexual was then content to share his life with a male companion or enjoy complete acceptance as a woman by society.

Surgical Considerations. Of the twenty-nine males who have had operations and who are known to the writer, only one retains his testes, implanted under the skin of the abdomen following a "redistribution" operation; the surgeon carrying out the operation was at that time reluctant to undertake castration for fear of legal reprisals. Twenty-one of these males were recommended for operation by the writer. The other eight had been recommended by other practitioners. In many cases, the opinion of at least two psychiatrists was sought before operation was undertaken, but this was not a universal practice. Two of the men recommended for operation by other doctors have in fact committed suicide since the operation, and this indicates the great care which must be taken in preoperative assessment of these individuals. Relative stability of personality and freedom from major psychiatric taint are essential prerequisites before operation is undertaken. In at least one case, threats of suicide had been used by the patient in an attempt to coerce the surgeon to operate, although in fact operation was carried out on other grounds. Nevertheless, it is probable that in this case the unhappy emotional condition was taken into account by the psychiatrist recommending this individual for operation. In general, I regard threats of suicide as an unsatisfactory basis for surgical intervention and indicative of a level of instability which would militate against a satisfactory postoperative condition.

Type of Operation. Table 5 shows the type of operation carried out on these males. All except one were castrated—that is, had bilateral orchidectomy. In one case this had been achieved by auto-castration by one determined man who imagined he had sufficient surgical knowledge to carry out the operation himself. He was mistaken; he needed urgent surgical assistance after each of his self-conducted orchidectomies.

Following orchidectomy, several different techniques were used. In eighteen cases penectomy and transperineal urethrostomy were carried out, the urethral orifice being resited at the anterior aspect of the scrotal skin which was in most cases partially resected and modified to give some appearance of labia. In some cases, a subsequent trimming operation was undertaken to improve the external appearance of the region and to give a more female aspect to the residual scrotal skin.

Table 5

Distribution of Transsexual Patients According to Type of Surgery

Type of Operation	
Simple penectomy and castration	17
Castration and vaginoplasty	11
Redistribution	1
Mammoplasty	4
Nasal reduction	1
Pinnaplasty	1

Vaginoplasty was undertaken in ten patients; with one exception, the penile skin was used, invaginated, to line a cleft between the bladder and the rectum. It was found that there were variable dimensions to the space available for the vagina but, in general, this space was inadequate to form a satisfactory opening. As will be seen when the results of the operation are considered, vaginoplasty seldom proved successful, although it was a feature much desired and highly prized by most men seeking the sex-change operation, for they felt that it connoted conversion to a female external appearance.

In one case, penectomy and castration had been carried out at an initial operation and at a later operation an attempt was made to make a vagina by forming a cleft between the rectum and the bladder and inserting a skin graft. Although the introitus was kept open by dilators for a period of time, it was never functional for sexual intercourse and eventually it became occluded.

As mentioned above, one patient has retained the testes. They are secured under the skin of the abdomen and the erectile tissue of the penis is still attached but is also distributed under the skin of the suprapubic region. This has been termed a "redistribution operation," for it makes possible to reconstitute a functional penis and a scrotum by plastic surgery. This operation was devised to avoid legal difficulties and the charge of mayhem. However, the patient concerned is not satisfied with the result and wishes for orchidectomy and vaginoplasty.

Other Surgical Procedures. Additional feminizing techniques were used in a minority of cases. Mammoplasty was an obvious request, but was carried out in four cases only. It was successful in two cases, although the end result was rather unnatural as the busts produced were "overfull" and gave a slightly grotesque appearance. In the other two cases, one breast failed to reach the desired proportions and a corrective operation is envisaged. All these mammoplasties were achieved by the insertion of silastic implants. The fourth patient had mammoplasty attempted by the insertion of curved pieces of cartilage, but the operation was not successful and no satisfactory augmentation of breast tissue was achieved.

Nasal reduction was undertaken in one case, but gave a somewhat "pinched" appearance to the nose. In the same patient pinnaplasty was also performed and the flattening of rather prominent ears improved the appearance.

Postoperative Status

Cosmetic Result. The genital region was surveyed after operation to assess the cosmetic results of surgery. Vaginoplasty with plastic surgery on the scrotum to form quasi labia majora produced the best result and the appearance in these cases made a good approximation to true female genitals, although on close examination absence of the clitoris and labia minora was noticeable, so the result could not be regarded as

"excellent" in any case. "Good" results were attained in the ten men who had vaginoplasty.

The cases treated by penectomy were less satisfactory, "fair" in sixteen, "poor" in two, and "very poor" in one case in which much scrotal tissue had been left to form an external invaginated pouch suspended between the legs. It is not surprising that this patient was very dissatisfied with the result of his operation.

Of the ten vaginoplasties, the functional result was not known in four cases. These four men gave evasive answers to questioning and it was impossible to ascertain the true state of their sexual functioning. Four men claimed to have a functional vagina and that they could have intercourse with male partners. In two cases the vagina had been occluded and intercourse was impossible.

Table 6
Evaluation of Cosmetic Results
of Male-to-Female Conversion Surgery

Category	Number of Patients
Good	10
Fair	16
Poor	2
Very poor	1

It is a striking fact that most of these men desired vaginas as an attribute of female bodily conformation rather than for the sole purpose of sexual relations with a male partner—a relationship which appeared to be of secondary importance to their wish to pass as women under all circumstances of inspection.

Patients' Attitude to the Cosmetic Result. Eighteen males were satisfied with the end result of surgery; their satisfaction was not necessarily related to the type of operation, and several who had simple castration, penectomy, and the formation of a shallow depression in the perineum were quite content with their achievement. Four were very satisfied with the result. On the other hand, six men were not content with the result of operation and demanded more extensive surgery; one of these dissatisfied men had borne three attempts at vaginoplasty, all unsuccessful. Another was actively dissatisfied with the operation and wished to have it reversed. Nineteen men were not able to have vaginal intercourse as no introitus had been fashioned at operation, penectomy and orchidectomy only having been carried out, with transperineal urethrostomy.

Postoperative Physical Changes. While a few males tended to acquire adipose tissue in some areas, giving a gynecoid appearance, this was not marked and was confined mainly to breast enlargement. Assessment of the feminizing effects of castration alone was difficult, as most contrived to take estrogens after undergoing surgery. Beard growth and

strength was also reduced, but the vasomotor disturbances and reduction of muscle power noted by Bremer (1959) in his series of 244 men (who had been castrated for propensity to sexual crime) were not encountered in my shorter series of twenty-nine cases, perhaps because, on estrogen treatment, the transsexuals would be protected against some postcastration symptoms. Bremer's men received no such hormonal substitution treatment.

Postoperative Attitudes and Status. The males were assessed for their degree of adjustment to their life situation following operation. This assessment was not made until at least three months had elapsed after operation and in many cases the assessment was made several years after operation. The assessments were objective, although the patients' attitudes were taken into account; the criteria employed were largely social and took note of the ease with which these converted transsexuals moved in society, their success in passing as women, their ability to support themselves where this was necessary, and the presence or absence of reactive psychiatric conditions; primarily, their adjustment in the female gender role was taken into account.

There were four cases in which the postoperative adjustment was worse than before operation. There the result can be designated "very poor." The behavior included suicide, suicidal impulse, moral depravity, and a wish to reverse the effects of operation. Two of these four men made good initial responses, but later expressed dissatisfaction with their postoperative status and wished that they had not been castrated; one found that he was not accepted in society as a woman, although he had appeared to pass without detection prior to operation. His adjustment was reverted to his preoperative level. Another man developed a depressive illness after operation and was assessed as "worse" on this account. Two men committed suicide and their postoperative condition was therefore definitely worse, although there were psychiatric factors in addition to the transsexual orientation in both cases and these factors conduced to their suicidal impulses.

A breakdown of the postoperative result is shown in Table 7 and, if compared with Table 4, shows the manner in which the adjustments have altered by operation. It will be seen that, despite worsening of the patient's condition in four instances, the general trend of the shift was towards improvement. Thus there were seven in the "excellent" category and ten more had moved into the "good" level of adjustment, a total of twenty-one cases in the "good" or "excellent" groups as opposed to only four in "good" adjustment prior to operation.

As noted above, four men were less than content with the effect of their operation. One, a psychopathic promiscuous homosexual, offered the operation because he was initially anxious for castration and because he was so much more congruous in the female than the male role, recanted some years after operation and asked for reversal of the pro-

Table 7
Evaluation of Adjustment
after Male-to-Female Conversion Surgery

Category of Adjustment	Number of Patients
Excellent	7
Good	14
Fair	3
Poor	1
Very poor	4

cedure; this is clearly impossible in view of the castration and penectomy he had undergone. Of the two males who committed suicide after operation, both had histories of depressive illness prior to operation, and in both cases the preoperative depression and attempted suicide were apparently linked with frustration in the male role. After operation and initial adjustment in the female role one of these men developed paranoid ideas and believed that he was being mistaken for another castrated transsexual who had achieved notoriety in the public press. He believed that he was talked about and recognized as a man wherever he went, despite being perfectly credible as a female, for he had been a female impersonator in his early life. The other suicide was a psychopathic individual who had made at least three attempts at suicide when in preoperative depressive states. The depression, which in retrospect appears to have been endogenous rather than reactive, returned some eighteen months after the operation and in this condition the patient, who was not under psychiatric observation at the time, managed to kill himself. His difficulties were increased by his antisocial personality and led to relative dissatisfaction with his postoperative accomplishments. In fact, neither of these men who succeeded in killing themselves were recommended for castration and penectomy by the present writer; their histories of preoperative psychiatric illness would have caused them to be regarded as potentially too unstable for castration.

Typical comments after the operation included feelings of deep satisfaction at having achieved, as they felt, a true female status, despite admission that they were in fact only castrated, feminized males. They reported an absence of self-consciousness and a feeling of being at ease and of having ultimately achieved a happy state with more peace of mind. Increased feelings of femininity occurred along with the development of a sense of identity with all women. They began to think of themselves as women rather than as disabled males. The fear of detection and of being suspected disappeared despite the fact that several were not entirely credible as females. Several described a sense of release and a change of mental attitude; they felt that it was now impossible to prove that they were not women. Most expressed a level of statisfaction in their new castrated status far superior to anything they had experienced

as men. Acceptance as women by other women and by the world at large was their ultimate satisfaction. The possession of a female vulva was of secondary importance to this.

The assertion that castration had made them feel more feminine was frequent, even if the cosmetic result fell short of a wholly convincing female anatomy. The simple absence of the penis and testicles rendered them female in their own minds, taken in conjunction with estrogen-produced mammary enlargement and the dress, behavior, and mental orientation of a female type. This mental orientation is, of course, a construct which the transsexual male has erected through a conscious cross-sex identification and represents a male conception of femininity. It is to be distinguished from actual femininity which comprises the conditioning processes of actual life as a female as well as the influence of hormonal and chemical psychosomatic interaction. Actual femininity is more than a set of attitudes and preferences, but it is these aspects that the passed and castrated males attempt to imitate. In its emergence it falls short of a true femininity, although those transsexuals who are skillful female impersonators can make a superficially convincing presentation of femininity, based on long practice and acceptance in the feminine role.

The removal of the visible anatomical structures which reflect basic masculinity is seen as the final step into true femininity. Only a minority accept it for what it really is—that is, a neutering procedure or, perhaps more correctly, a castrating process. It is difficult to persuade transsexuals who have had their genitals removed that they are in fact nothing more than castrated males, although they may give lip service to this concept if pressed. Because of their often consciously fostered orientation they compel themselves to believe that they are at last women. It is true that the original identification with the female begins at so early an age that they are often unaware of a conscious desire to identify across the factual sexual status, but conscious attempts to reinforce this cross-sex identification do occur to them in later childhood and adolescence as a result of their increasing knowledge of their true anatomical status.

By castration the transsexual patients have achieved, to a limited degree, a harmony of mind and external conformation which they assert will entitle them to take on the full privileges and functions of a female in society. In fact, they fall short of full function as a female for obvious reasons related to coition and reproduction—regardless of how they may attempt to convince themselves that they are female. Nevertheless, as Table 7 shows, the majority are well pleased with their partial female sexual functions and subjectively are content with the limited change in actual physical status. They feel that they are no longer in transition between one sex and the other, that they have arrived at last, and that they have taken up their proper sex role.

Following operation, there was a tendency to further self-deception

over sexual status, and at least nineteen regarded themselves as having achieved the female sexual status. If pressed, they would admit that they were aware that they could not conceive in view of the obvious absence of a uterus (although as previously stated, one man believed that he possessed a rudimentary uterus). There was, nevertheless, a marked tendency to regard themselves as true women and not merely as neutered males, no matter how plainly this fact was demonstrated to them. They could not see themselves as phenotypical males whom surgery had modified so that they could resemble the female phenotype. For them the presence of mammary enlargement and the absence of male genitalia meant a female status—no matter how crude was the representation of the female external genitalia achieved by operation.

Their conviction of female status is, of course, reinforced by the treatment accorded to them by society at large. Presenting as they do the external appearance of females and giving out signals which indicate that they are female, by mannerism and dress, observers take them at their face value and treat them accordingly. After the long period of compulsive efforts to achieve operative intervention, after the trauma and pain of the operation itself, and after experiencing the permissive attitudes of doctors and nurses who shepherd them through the surgery, it is understandable that they seek to justify this protracted endeavor by a wholly successful outcome. They *have* to believe that their sufferings have been worthwhile and have ended in success. If they do not reach this happy consummation of their efforts, they have to admit a failure. I have shown that in two cases such failure lead to suicide.

Six Female Transsexuals

Preoperative Status

Six female transsexuals are reported who have had operations in order that their external appearance may conform more to the male habitus.

Sexual Orientation. All six patients were classical female transsexuals of homosexual orientation. All were living in the semblance of a husband to a female homosexual partner. Naturally, all were the active "butch" type of lesbian partner and in every case their life histories followed the traditional pattern of early confusion over sexual identity preceding the emergence of homosexual attraction. Like the male transsexuals, their age range fell between twenty and forty years when first seen. They were clustered at the homosexual end of the Kinsey Scale. Only one was classified in Kinsey Group Five; this patient had married and divorced before she turned to an exclusively homosexual pattern of behavior claiming that she had found sexual intercourse extremely distasteful. In each case, it was the desire to act more convincingly in the male role that seemed to drive these women to seek masculinizing operations.

Social Class of Female Transsexuals. Of the six women, two were in the lowest social class; one of them worked as an unskilled laborer and the other one as a roundsman, although she had been in social class III as a bank clerk prior to passing into the male gender role. The semi-skilled worker in class IV worked as a bricklayer and thus supported her "wife." Of the two women in social class II, one was an executive in an advertising firm and the other worked as a "male" nurse. The woman in social class I was a medical doctor, who had passed into the male gender role shortly after qualifying as physician and who worked at first as locum tenens and later as assistant to a practitioner with an extensive private practice. In her medical practice this woman was highly proficient; she had aspirations towards becoming a plastic surgeon in order to be able to offer assistance to others similarly placed as herself. All except one supported their female partners as if they were the breadwinner in the family, and they took the responsibility for buying or renting the house and made the major decisions in their role of husband.

These women suffered from a somewhat youthful appearance in their male impersonation, but all except one slightly built woman were credible in their appearance. The appearance of lines and wrinkles on their faces increased the masculinity of their appearance in two cases. The other four had rather smooth facial skin with light down in the beard area. However, two had been able to grow moustaches under the virilizing effects of androgens.

Postoperative Status

All six patients had bilateral mastectomy with good cosmetic results in five cases. The sixth case had rather marked postoperative puckering of the mastectomy scar, although this became less noticeable in the course of a year. This was a disability because she was unable to appear on the beach without covering for her chest and this had been one of her ambitions. However, she expressed herself as satisfied with the operation from the psychological point of view, and was happy to be able to wear slacks and a shirt without breast protuberance which would call attention to her female status.

In addition, penoplasty had been performed in one case by plastic surgery, and the patient was able to pass urine through a slightly hypospadic "penis." Further corrective surgery was being undertaken to remedy this defect. This patient was particularly satisfied with her ability to pass urine in the upright position and was almost entirely satisfied with the result of surgery, although the penis appeared a little misshapen in comparison with a normal one. She said that despite its shortcomings she would not be without it and would undergo any surgery suggested to achieve a more satisfactory result. There was no regret over the outcome of the operation. This patient attempted to

use the constructed penis in sexual relations with her female companion and in doing so rendered the somewhat delicate organ liable to damage and breaking of suture lines.

Another patient (number six) is at present undergoing a similar penoplasty and, in spite of being a medical practitioner and therefore a more critical patient, expresses satisfaction with the course of events despite the time and repeated hospital admissions involved.

Hysterectomy was not performed on any patient, and has been requested by only one female, the "male" nurse. So far this request has not been implemented, partly because surgeons are reluctant to undertake this procedure. However, if it is logical to perform orchidectomy and penectomy on transsexual males, it is equally logical to hysterectomize and oophorectomize females, although they may thereby suffer the symptoms of an artificial menopause.

These female transsexual patients had received androgen therapy with some virilizing effect and two were able to grow a fairly full moustache. In all cases menstruation was suppressed by oral androgen therapy, but reappeared if this was omitted for three weeks and caused much embarrassment, notably to the one woman who had represented herself to her wife as a male hermaphrodite.

Table 8
Summary of Postoperative Status of Six Female Transsexuals

Case Number	Acceptability as a Male	Assessment of Results of Operation:		Social Adaptation
		Objective	Patient's	
1	Credible, if youthful	Good	Almost wholly satisfactory	Good
2	Poor	Fair	Good	Fair only
3	Entirely credible	Good	Satisfactory	Excellent
4	Credible	Good	Good but still dissatisfied	Good
5	Entirely credible	Good	Wholly satisfactory	Excellent
6	Credible, if youthful	Good	Satisfactory	Excellent

Table 8 shows that the postoperative results in the female transsexuals were almost universally satisfactory. This underlines the generalization that it is easier for a woman to pass credibly as a man than it is for a man to pass as a woman without arousing suspicion. In both sexes the individuals chosen for operation were selected because they were credible in their impersonation or, in the case of some males, had won sexual acceptance in the female role despite minor incongruous features. In the female cases, there was some variation in the degree of masculinity. In retrospect, female patient number two was rather too youthful and effeminate in her male impersonation to make a wholly credible male.

CONCLUSIONS

What does the future hold for these patients? When those who made reasonably attractive women lose their feminine appearance and realize that the coarsening of their features will make them resemble masculine women, will they be still content in the female role? Experience of four older male transsexuals suggests that it is possible for them to accept a decline in femininity in themselves and that they seem content to lead prosaic lives on a less intense level as the companions and friends of their male partners, a relationship in which no very great sexual involvement occurs. To be accepted by society as women is, after all, the basic aim, and to be happy in this achievement is enough for most of these men.

The female transsexuals are better placed for they will be able to present as fairly convincing men even in their later years, when wrinkling of their faces and growth of facial hair will confirm the masculine appearance. The women here reviewed had all made satisfactory adaptations in their chosen gender role and were happier and better adjusted after operation. They had found acceptance as men and, like the male patients, had achieved their aspirations to a major degree, happy in the companionship of their female partners.

The postoperative results reported above indicate that the majority of males and females undergoing operation for sex reassignment are subjectively and objectively improved both in their adjustment to their environment and in their own feelings of well-being and satisfaction in their gender role.

Although some were making a tolerable adjustment prior to operation, almost all improved in that adjustment. Approximately a quarter of the males achieved a level of personal satisfaction and facility in the female gender role that could be described as excellent, even when the ability to sustain sexual relations per vaginam with a male partner were lacking. Of the fourteen percent who were worse in their general life adjustment following operation, the result could have been predicted in half of their number. This emphasizes the extreme care that must be taken in the selection of candidates for operation from the many transsexuals who clamor for operative intervention. An absence of familial and personal traits indicative of predisposition to psychological maladjustment is a good prognostic factor and further qualifies for operation the transsexual who is on other grounds suitable, and increases the prospect of good adaptation in the chosen gender role.

Patients seeking sex-reassignment operations are, almost by definition, to some degree unstable and maladjusted. It is the duty of physicians and surgeons undertaking sex-reassignment procedures to select their cases with as much care as possible, and this implies fairly lengthy observation and thorough investigation before the irreversible steps of castration

or mastectomy and penoplasty are recommended and implemented. Signposts and indications are only now being established in this new field of surgical therapy; it is a field in which the physician or psychiatrist must cooperate with the surgeon and make responsible recommendations and exclude ruthlessly all who are too maladjusted or constitutionally predisposed to psychiatric illness.

On balance, this type of intervention in the assignment of sexual status seems to be justified for those who, although ill at ease in their initial phenotypical sexual status, are in other respects within normal limits. The improved psychological adjustment of these individuals after operation bears striking witness to the efficacy of sex-reassignment surgery. It seems that a majority of those undergoing such operative intervention are, in the end, content with their status. Certainly there is often massive relief of mental suffering and discontent, with an increased incentive for living and working which can make these socially disabled individuals contributory, worthwhile citizens.

SUMMARY

The justification for sex-reassignment surgery was examined in thirty-five cases (twenty-nine males and six females). The clinical presentation of individuals seeking sex-conversion operations revealed an early compulsive drive towards sex change. The sexual orientation of males seeking sex-change operations was found to be predominantly homosexual and the majority were in their third decade of life when they sought sex reassignment. A few psychopathic individuals managed to achieve sex-conversion operations and the incidence of psychopathic propensities among transsexuals was found higher than for the normal population. Depressive illness occurred, possibly reactive to frustration in the originally assigned sex role. It was necessary to observe patients considered for operation for many months. No patient showed physical abnormality or hermaphroditism. The males showed great repugnance for their sexual organs and found them embarrassing and a hindrance to full acceptance in the female role. Some transsexual males deluded themselves that they would achieve a true feminine status. Approximately fifty percent showed a predisposition to psychiatric illness which may have contributed to their maladjustment in the gender role assigned at birth.

The preoperative adjustment of the males was poor in over one third of the cases and only fair in another third. Almost all the operated males had penectomy and orchidectomy with transperineal urethrostomy. Vaginoplasty was carried out in a third of the cases but was seldom satisfactory. Mammoplasty was carried out in four cases. The overall postoperative appearance was good in only a third. Despite this, two-thirds were satisfied with the end result of surgery. The postoperative physical changes were not marked but the psychological attitude showed an improvement in a significant number. Most postoperative patients

reported a greater well-being and an improved adjustment with a feeling that they were wholly accepted as females.

Of the six female transsexuals, all were of homosexual orientation with permanent female partners. Greater proportion belonged in higher social classes than in the case of males. All female patients had bilateral mastectomy; two had penoplasty with only moderately successful results. Most of the women were satisfied with the results of surgery and passed successfully as males.

The future of these surgically converted patients is somewhat problematical, but the immediate postoperative results suggest that operation was justified in the light of subjective and objective improvement in life adjustment.

CHAPTER 27

AVERSION TREATMENT IN TRANSVESTISM AND TRANSSEXUALISM

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New methods of treatment often lead to better understanding of the condition which is being treated; psychoanalysis is a good example. Recently, aversion techniques have been used to treat transvestism, and to a much smaller extent, transsexualism. The many unsolved problems associated with the origin and classification of these syndromes are set out elsewhere in this book; this chapter describes how aversion techniques have been used in transvestism and transsexualism, to show what changes take place during treatment, and to consider what light these cast on the disorders.

Aversion treatment has been in use since the 1930s when it was introduced as a treatment for alcoholism. The extensive literature about its use in alcoholism was well reviewed by Lemere and Voegtlin (1950). Aversion treatment used repeated association of an unpleasant stimulus with an undesired behavior pattern with the aim to extinguish that behavior. For example, nausea and vomiting were induced repeatedly with apomorphine or with emetine and associated with the drinking of alcohol. Gradually, the sight and smell of drink came to be associated with the feelings of nausea which had originally resulted only from the apomorphine. This treatment has proved to be distressing, exhausting, and occasionally even dangerous; it has largely been replaced by other methods in the treatment of alcoholism.

However, aversion treatment can use other unpleasant stimuli, such as mild electric shocks. Shock aversion has now been widely adopted because shock is less distressing than apomorphine, and at the same time more reliable in its effects and easier to control. Shocks are given from a safe shock box of the kind used by psychologists in experiments

on learning with normal volunteers. The shocks must be unpleasant, but need not be distressingly painful; their intensity can be easily adjusted.

The introduction of mild shocks allows aversive stimuli to be given repeatedly and at short intervals. Thus changes in the reinforcement schedule can be introduced to enhance learning and, for example, some of the aversive stimuli can be delivered on a so-called partial-reinforcement schedule, which is known to produce more lasting learning in laboratory experiments.

There are many ways in which laboratory findings can be put into practice. However, until there is a theory of learning which is generally accepted and the many conflicting experimental observations about learning both in man and in animals have been resolved, clinicians who use aversive methods will have to proceed empirically. Bancroft (1969) has reviewed this matter cogently and no further discussion will be attempted here.

In using aversion treatment, clinicians must be aware of certain ethical problems. Aversion therapy is unpleasant for the patient—as are many other medical and surgical procedures. However, although society's response to the sexual disorders is usually to punish them, doctors must always make it clear that in using this unpleasant treatment, they are not punishing the patient. Aversion therapy must be used only when the patient is coming for treatment on his own decision, has had the treatment fully explained to him, and knows that he can discontinue the treatments whenever he wants. Even if he expresses full cooperation, the doctor must still assure himself, by weighing the whole case history, that the patient is not under pressure from others and that he is not seeking vicarious gratification—as a masochist might. We shall see later, however, that patients with masochism usually can be treated successfully because they obtain no satisfaction from the treatment situation.

Aversion Treatment and Sexual Disorders

Before turning to those studies specifically concerned with faradic aversion in transvestism and transsexualism, it is necessary to review earlier work. Aversion therapy was first used in sexual disorders by Raymond (1956) who successfully treated a fetishist with apomorphine aversion. Raymond's report prompted Lavin, Thorpe, Barker, Blakemore and Conway (1961) to apply the method to a transvestite. They followed Raymond's method using injections of apomorphine. Pearce (1963) then studied eight transvestites who were treated with apomorphine aversion. Like Lavin, Pearce reported only the final outcome of his patients, seven of whom had improved markedly sixteen to twenty-four months after treatment. He did not measure detailed changes during treatment but did describe the patients' emotional responses to treatment. None of his patients was a transsexual.

Intensive treatment with apomorphine and emetine was so difficult to carry out and so distressing for the patient, that once it was shown that aversion treatment could produce changes in these patients, an alternative method was sought. Blakemore (1963) used mild faradic shocks. They were applied to the patient's feet as he stood on a grid, leaving him free to cross-dress and undress. However, this method was still somewhat uncertain because it was difficult to ensure reliable contact between the patient's feet and the grid. McGuire and Vallance's (1964) innovation was extremely valuable. These authors showed that aversion therapy can still be effective if patients are given shocks while they imagine their deviant sexual behavior instead of carrying it out.

The method which we have employed applies aversion to behavior carried out both in imagination and in practice. The aversive stimulus is produced by a safe and simple shock box powered by small batteries. Faradic shocks are delivered to the patient's forearm or leg. The apparatus delivers 200-volt impulses each lasting about 2 milliseconds at 50 cycles per second. The patient selects the shock strength which is sufficient to remove all pleasure from the act of cross-dressing. It is stressed that he should not endure pain, and a careful watch is made of his reactions to ensure that he is not suffering an unduly strong shock, either in a mistaken attempt to be cooperative, or for some other reason. Equally, the shocks must not be so mild that the deviant behavior in the treatment session remains enjoyable.

Shocks are delivered in two ways: in "practice," when they are associated with the act of cross-dressing, and in "fantasy" when they are given as the patient imagines his deviant behavior. When given in practice, the patient dresses until, after a variable and unpredictable interval, a warning signal is given. After the signal he may get from one to three shocks, which cease when he has removed all the clothes and which can sometimes be escaped completely if he removes his clothes sufficiently quickly. When given in fantasy the patient signals the point at which he has a clear mental image of the required part of his deviant behavior. The signal is followed by one or two shocks which dispel the image immediately. In this case, the point for intervention is a subjective one and it can be falsified by the patient. Some checking is possible by a penis transducer and other physiological measures. These will be described later but the final assessment depends very much on clinical judgment of the physician and on his careful questioning of the patient. Patients who do not wish to cooperate can avoid doing so, but un-cooperative patients, in any case, should not be treated. There is, however, some advantage in having a built-in safeguard against the possibility that patients might be treated against their wishes.

This combination of "practice" and "fantasy" in aversion treatment makes it possible to reach the patient's abnormality at several points in the sequence, from its initiation in internal feelings and imagery to

its final expression in overt behavior. The use of mental images allows treatment of behavior patterns which cannot be reproduced in the clinic, either because of its nature, for example, homosexual acts, or because it is founded almost wholly in feeling and imagination and very little in overt behavior, for example, the longings for sex change of a transsexual.

It is convenient to deal with small segments of behavior at a time because this allows us to study much more precisely the way in which changes come about. Only by understanding the mechanisms by which change comes about can we reach a clear understanding of the type of disorder which can be treated, and in particular, how far transsexualism, rather than simple transvestism, can be treated.

So far, aversion therapy has been used very little in the treatment of transsexualism as opposed to transvestism. Evidence about the value of this technique in dealing with transsexual patients therefore has to be obtained indirectly.

A number of detailed investigations of fetishists and transvestites have shown what changes can be brought about by aversion therapy and what may be expected in transsexuals. Finally we have studied a small number of transsexuals who have received aversion therapy.

We shall now describe the changes which have been found to occur in transvestites and fetishists. The changes during treatment include changes in sexual fantasies, in attitudes, in autonomic responses, and in emotional reactions. Changes after treatment can be divided into those in sexual behavior, in other social behavior, and the tendency to relapse.

Changes in Sexual Fantasies

Shocks were given to transvestites each time the patient conjured up a vivid visual image of some behavior related to his cross-dressing. Changes occurred in the patient's ability to reproduce these visual images; about half the patients found it increasingly difficult to produce a mental picture, the rest continued to imagine it promptly but reported that it gave rise to less and less pleasure. The first type of response is particularly interesting and was studied in detail. For reasons which will become apparent, the process can conveniently be called "repression."

Development of "Repression"

The time taken by the patient to report a clear image was measured each time he was asked to imagine it (each "trial"). Figure 1 shows how this time (the "latency") changed with successive trials in three sessions in one patient. The dotted lines represent the point at which the patient said he could obtain no picture after three minutes. Similar curves were obtained from other patients who showed these changes. The latency rises a little in the first session, more steeply in the third, and still more steeply in the fifth session. In this patient the latency

of the first trial in each session changes very little. Since the image was quickly brought to mind on the first trial of each session, it had not been forgotten or extinguished. However, subsequent repetition rapidly became more difficult, indicating a process of suppression or repression. Some patients reported vivid dreams of their fetish at times when they could not imagine it in treatment, lending further support to the idea that the process is one of repression. In most patients repression remained incomplete, but a few became completely unable to imagine the treated sexual fantasies, not only during treatment but even four months later, without any further threat of shock after treatment.

It might be argued that the measure of latency depends on the patient's report and is therefore unreliable. However, the gradual increase in latency during repression is not the most rapid way of avoiding shocks, so that it seems unlikely that it was deliberately faked to this end. Moreover, it is very difficult for the patient to fake these curves of increasing latency, for this requires an unusually accurate estimate of the passage of time, as well as a degree of psychological sophistication.

Three other facts suggest that the latencies were genuine. When treatment began, several patients developed penile erections while they imagined their deviant behavior. This was measured on a penis transducer and recorded on a polygraph. In the early stage of treatment, erections would often start shortly *before* the patient signaled that he had a clear image. Thus the therapist could predict when the patient would signal the presence of a fantasy.

Palmar skin conductance measurement provided another check on patients' reliability. Continuous recordings of palmar conductance showed that spontaneous fluctuations of skin conductance changed specifically during the period in which fantasies were reported.

The third fact was the presence of a generalization gradient in the repressed material, which argues that the process was a learned conditioned avoidance response rather than a voluntary act. This will now be described.

Generalization Gradients

Once repression has occurred, we can study how its effects generalize. Does it apply only to the particular mental image associated with the shocks, or is there spread to related images? Evidence about this is not available from all patients. Figures 2 and 3 show the changes in one patient which appear representative of others tested, although further research is required before we can state how general this finding is. This patient was treated for sadistic sexual fantasies in which he imagined himself beating another man on the buttocks. These fantasies had apparently never been acted out and the patient was married and engaged in normal sexual practices with his wife. First, the patient was

asked to imagine repeatedly that he was beating a man on the buttocks. He repeated this for three sessions: no shocks were given at this stage, and the latencies, which were short, did not increase (Figure 2). He also imagined having normal sexual intercourse with his wife; again the mental image appeared with the image of beating. The latency of this image of normal sexual intercourse (which was not, of course, associated with shocks) increased very little—from two to eight seconds.

At the next treatment session, the patient was asked to imagine a number of scenes which were increasingly dissimilar from the original image of beating. No shocks were given. Although shown in order in Figure 2, the scenes were presented randomly to the patient. All images which included beating had a latency of about seventy-five seconds, irrespective of the part beaten. However, when the part of the body was imagined without any associated act of beating, a generalization gradient appeared; parts of the body nearest to the buttocks took longest to imagine, distant parts took least time. This gradient will be referred to as an "anatomical gradient."

Another kind of gradient was also demonstrated (Figure 3). The patient was asked to imagine the same part—the buttocks—at each trial but associated with an activity which differed in the degree of injury inflicted. Again a gradient was found, even though the order of presentation was a random one at the time of the test. This will be called the "sadistic gradient."

Finally, the same tests were repeated four months after the end of treatment (Figure 4), and the same pattern was present.

These findings are consistent with the idea that "repression" is the result of conditioning, and they resemble the generalization gradients which are obtained after semantic conditioning (Feather, 1965). The findings must be repeated in an adequate series of patients before firm conclusions can be drawn. This is an important observation not only because of the light it throws on the mechanisms of "repression" in aversion therapy, but also because some degree of generalization must occur if any conditioning treatment is to be useful. Without generalization, treatment would be extremely lengthy, for each separate segment of the abnormal behavior pattern would have to be treated.

Patients' Experience of "Repression"

As latencies increased, patients reported more and more difficulty in obtaining a mental image. No leading questions were asked when reports were collected: patients were merely asked to describe fully what they were experiencing. One patient, whose statement is typical of others, said: "It's like when you see something out of the corner of your eye and then look in that direction and it's not there. It's like trying to push through a web of cobwebs to hold the picture even for a moment." Some reported that, as they tried to concentrate on the

required scene, another would take its place, for example: "I can't seem to get a picture. I keep getting something else instead; I don't seem to be helping you." Another patient said: "I can't seem to get a picture of myself cross-dressed. I get a picture of a girl instead." However, in the early stages of repression, patients said that the image produced sexual arousal, "when I do get it, I seem to react automatically." As repression increased, this sexual affect diminished.

About half of the nineteen patients showed no evidence of repression or lengthening of response latencies. They reported that sexual feeling associated with the images diminished gradually as aversion continued.

Associated Autonomic Changes

Autonomic changes will be dealt with more fully in a subsequent section. For the moment, it is only necessary to describe the changes observed during the development of "repression." Transvestites show varying degrees of penile erection when they imagine their cross-dressing behavior. These erections can be measured in the manner described later. Figure 5 shows how erections diminished progressively in one patient as the latency of fantasies increased during aversion. This patient was a transvestite who was also aroused by masochistic fantasies, and it is the course of one of these latter fantasies that is shown in Figure 5. Erections had disappeared at a time when the patient could still imagine the fantasy. Repression never developed in this patient—that is, erections were extinguished without repression occurring.

The Role of Aversion in "Repression"

Do the observed changes depend on the shocks which are given, or are they the results of other elements in the treatment situation, such as simple fatigue due to repetition? Figure 6 shows changes in one patient which have been confirmed in others. For the first four sessions the patient imagined his fantasy repeatedly but received no shocks: little change of latency took place. Shocks were introduced during the next three sessions, and the latency increased rapidly until "repression" eventually took place. At this point the patient could still promptly imagine a heterosexual intercourse. Thus, although non-specific factors may play a small part, it is the shocks which make the major contribution.

What Can Be "Repressed"?

Only half our patients "repressed" when shocks were associated with mental images of their deviant sexual behavior. The rest described a progressive diminution of the feelings associated with the images, but continued to imagine them quickly. We do not yet know what individual

differences in personality or other qualities account for this difference in ease of repression. It is possible that some mental contents may be more easily repressed than others, but much more work is needed before we can define which kinds of mental content—over-valued ideas, obsessions, or even delusions—can be affected. Such an investigation would throw valuable light on psychopathological mechanisms.

Autonomic Changes

The changes described so far depend very much on patients' self-reports, and are open to the objection that they may have been falsified, either deliberately or unconsciously. We have taken precautions to avoid this and have already presented the reasons why it is most unlikely that our results are vitiated by such bias. Nevertheless, it is useful to have an additional objective measurement of the changes which occur. Measurement of penile erection provides this and at the same time yields information about another important problem in the psychopathology of patients with transvestism and transsexualism.

Penile erection can be measured without unpleasantness for the patient with a simple transducer (Bancroft, Jones and Pullan, 1966). Details are given in the original publication; essentially it consists of a small mercury-fitted plastic loop which the patient slips over the shaft of his penis. This is connected by an unobtrusive lead to a strain gauge and clothing can be worn normally. Patients become quickly accustomed to the device and do not express embarrassment.

Not surprisingly, some patients develop erections more readily than others, younger patients tending to show the greatest responses. By associating shocks with erections which accompany deviant sexual behavior, these erections can be extinguished. Figure 7 shows this in one patient; the others followed the same pattern. This patient, who had particularly intensive responses, showed the specificity of this extinction well. At the beginning of treatment, the patient, a transvestite, reacted promptly when he saw or felt women's panties, slips, skirts, and pajamas. He also reacted quickly to pictures of female nudes. The histograms at the bottom of Figure 7 show the amount of response after one minute's contact with each article. Aversion treatment was then applied with each garment taken one at a time. As conditioning proceeded, the time taken for a ten-unit deflection on the transducer—the latency—was measured (this is a response which is only just perceptible to the patient). The latency increased with successive sessions until the response was extinguished (Figure 7, upper curves). When the patient was then retested with all the original articles, only the response to the treated garment was diminished. As each garment was treated, the response to it was extinguished while the responses to other articles remained unchanged. At the end, only the response to the photograph remained. Many more cases must be treated and studied before reliable

findings can be established, but the high degree of specificity indicated by the present sample is in complete agreement with the clinical observation that patients whose deviant responses are extinguished by aversion treatment retain and indeed often increase their heterosexual potency.

Attitude Changes

Patients' attitudes to clinically important concepts were measured with the semantic differential. This technique employs controlled associations to measure attitudes quickly and reliably, and it has proved its value in other investigations of psychiatric patients (Marks, 1965; Osgood, Suci and Tannenbaum, 1957). In this instance, patients were asked to rate relevant concepts (women's clothes, sexual intercourse) on a series of bipolar adjectival scales (good-bad, seductive-repulsive). Each scale had seven points with the midpoint as neutral or irrelevant.

Results will be reported for three factors derived from ten scales. Evidence for the factorial composition and reliability of these scales is reported elsewhere (Marks and Sartorius, 1969).

Evaluative factor:	pleasant-unpleasant
	good-bad
	kind-cruel
Sex factor:	seductive-repulsive
	sexy-sexless
	exciting-dull
	erotic-frigid
Anxiety factor:	placid-jittery
	calm-anxious
	relaxed-tense

Patients' scores on the evaluative and sex scales corresponded closely to their reports of feelings, to their behavior, and to their penis transducer responses. All changed in the same direction but at rather different rates.

When patients were seen for the first time, they had favorable attitudes to the objects of their sexual deviation, to sexual intercourse, to themselves, their parents, and their doctors. These attitudes changed little during the time patients waited for admission and during their first few days in the hospital before shocks were given.

Once aversion treatments began, patients selectively devalued those deviant concepts which concerned the objects paired with shocks in treatment. This devaluation followed the same order in which aversion was coupled with object in treatment. Figure 8 shows this in detail on the evaluative scales in one patient. Three concepts related to his transvestism ("corsets," "panties," and "brassieres") remained very favorable, after he had spent three days in the hospital practicing repeated

cross-dressing but receiving no shocks (Figure 8a). On the fourth day shocks were given in two sessions in which he both imagined wearing a brassiere and actually wore one. His attitude to "brassieres" became significantly less favorable immediately after the aversion treatment (Figure 8b), although his evaluation of the untreated garments ("corsets" and "panties") remained unchanged. For the next four sessions, shocks were given while the patient imagined and handled corsets and panties. At the end of these sessions his attitude to the concepts "corsets" and "panties" had become as unfavorable as his attitude to "brassieres" (Figure 8c). When treatment ended after eleven more days of shocks, these three concepts were devalued further (Figure 8d). However, the patient relapsed partially in the next five weeks, after discharge. At the same time, his attitudes to these three deviant concepts again became highly favorable (Figure 8e). The concept "my mother" remained highly valued throughout, and the concept "sexual intercourse" changed only slightly.

Not only were the changes in attitude closely related to the introduction of shocks into treatment, but attitudes accurately reflected the patient's clinical state during both improvement and relapse. Moreover, as we have seen, the erections provoked by different articles of clothing diminished selectively in the same order as attitudes changed. Attitude scores predicted a clinical relapse of another patient before he reported it in the follow-up interviews.

Patients showed a remarkably similar pattern of change in attitudes at corresponding stages of aversion treatment. Concepts concerned with the sexual deviation changed during aversion much more than at other phases of treatment; other concepts changed very little at any time. Similarly, deviant concepts changed much more than any other concepts after aversion treatment. Table 1 shows the mean change in the factor scores of eight patients, from admission to hospital until discharge after faradic aversion treatment. Changes are reported in scale units. A change in factor score of one is more than three standard errors (Marks and Sartorius, 1969) and was taken as a convenient cut-off point which marked significant changes in attitude. In the results which follow only changes of one or more scale units in the population are therefore accepted as non-random.

The top half of Table 1 shows how much each of ten concepts changed. Only the three concepts concerned with the sexual deviation changed significantly. Moreover, this change occurred only on the general and sex evaluative scales, not on the anxiety scales, that is, deviant concepts became significantly less "pleasant" and less "sexy." Control concepts and those involving normal sex did not change significantly on any scale. The lower half of Table 1 summarizes the group mean of concepts within each of the three areas of sexual deviation, "normal" sex, and control concepts. The only significant features are

Table 1
Mean Change in Factor Scores During Treatment of Eight Patients*

Concept	Factor		
	General Evaluation	Sex Evaluation	Anxiety
A. Sexual deviation:			
1st concept	1.0	1.8	0.3
2nd concept	1.5	1.5	0.2
3rd concept	1.4	2.1	0.7
B. "Normal" sex:			
sexual intercourse	−0.2	−0.3	−0.6
my wife	0.3	−0.4	0.7
women	−0.3	0.3	0.3
C. Control:			
my mother	0.4	0.1	−0.6
my father	0.3	0.2	0.0
myself	−0.2	−0.1	−0.3
my general practitioner	−0.1	−0.2	0.0
Mean values for group:			
A. Sexual deviation	1.3	1.8	0.4
B. "Normal" sex	−0.1	−0.1	−0.5
C. Control	0.1	0.0	−0.2

Notes: Only changes of 1.0 or more are accepted as non-random (see text).
An *increase* in score means a shift towards the unpleasant, sexless and anxious poles of the factors.
A *decrease* in score (i.e. negative mean change) indicates a shift toward the pleasant, sexy and less anxious poles of the three factors.
* Source: Marks and Sartorius, 1969.

devaluation and "desexualization" of deviant concepts. Again, anxiety scales did not change significantly.

Evidence for Aversive Conditioning

It might be expected that successful aversion treatment would result in patients experiencing anxiety in connection with their deviant behavior. In fact, in most patients, deviant objects became either less pleasant or neutral, rather than actually unpleasant. However, a minority of patients gave evidence of persistent conditioned anxiety or displeasure to their deviant behavior. For example, a transsexual patient reported three days after discharge: "I don't want to touch [women's] clothes; I feel as if they are dirty." Another patient, a transvestite, reported two months after discharge that when he masturbated while looking at photographs of nude women, pictures of women's clothes tended to appear in his mind but always went away again quickly, "It's almost as though there is a blocking mechanism; if I have an erection and then think of [women's clothes] the erection goes." Four months later this patient reported that his mother and sister would leave their underclothes lying about the home. He touched some of their clothes, but at once felt anxious. After a bath one day he wrapped a towel around himself like a skirt, but had to take it off because he felt anxious.

Another transvestite, months after discharge, thought of trying cross-dressing, then suddenly thought of his aversion in the ward; this dispelled the thought and the erection, and such thoughts did not recur. Earlier, while on a weekend home visit during his treatment, he had slept after lunch wearing men's sheer nylon briefs; he used to regard them as a substitute for panties. When he awoke he was tense and irritable and couldn't understand why. Then he remembered the briefs, took them off, threw them away, and at once felt better.

The absence of conditioned anxiety did not necessarily make the prognosis poorer; most patients remained well at follow-up, though their feelings about the objects of their sexual deviation were only neutral rather than anxious. It might be supposed that aversion treatment is a paradigm of an experimental attempt to produce phobias. That we could not produce phobias in this way may have important implications for the etiology of phobic disorders.

Changes in Sexual Behavior

It is convenient to discuss first the changes at the end of treatment and then to describe the findings at a follow-up. So far, twenty patients have completed treatment and fourteen have been followed for at least six months. Of the twenty patients (Table 2), ten were transvestites with no other major problem, five were transvestites with moderate transsexualism, three had sadomasochism as the main deviation, one had a boot fetish, and one had a fetish for lame women. One of the transvestites and the boot fetishist also had associated masochism.

All except two patients showed moderate to marked improvement in their deviant behavior by the end of treatment. This improvement was shown in several ways. First, deviant sexual fantasies diminished in frequency or disappeared completely where previously they usually lasted for hours and could often only be dispelled by masturbation or deviant behavior. After treatment, fantasies were transient and associated with little or no sexual arousal. Masturbation was now accompanied by heterosexual fantasies although some patients continued to have occasional deviant fantasies during masturbation. Next, the patients' urges to act out their deviant behavior diminished by the end of treatment and, in some, these urges were eliminated completely.

Two exceptional patients require mention. The first was a transvestite whose deviant behavior improved only a little by the end of treatment although it improved further in the seven months after treatment. The second exception was a transsexual who was the only patient who showed virtually no change by the end of treatment. He was highly ambivalent about treatment to the extent that two weeks before he was admitted he had a subcutaneous estrogen implant to feminize his body. Further, he would not allow aversion to be given as was necessary but instead insisted that shocks be restricted to a small segment of his total repertoire

Table 2
Outcome Treatment of Deviant Behavior in Each Patient

Number	Age	End of Aversion Treatment	End of Follow-up	Duration of Follow-up (months)	Relapse Recorded
Uncomplicated transvestites					
TV1	21	3	0	22	after 1 year
TV2	33	3	3	19	—
TV3	23	2	2	13	—
TV4	34	3	3	12	—
TV5	26	3	missing	—	—
TV6	35	1	2	8	—
TV7	43	3	2	8	—
TV8	36	3	2	7	—
TV9	22	3	2	2	—
TV10	31	3	1	3	after 2 months
Transvestism with transsexualism					
TS1	32	3	1	15	—
TS2	26	3	missing	—	—
TS3	38	3	1	20	after 1 month
TS4	36	2	0	9	after 1 month
TS5	50	0	0	4	(never changed)
Sadomasochism					
S1	57	3	3	6	—
S2	18	3	3	7	—
S3	20	2	2	2	—
(TS3)	(38)	(3)	(3)	(20)	—
(F1)	(35)	(3)	(1)	(15)	after 12 months
Fetishism					
F1	35	3	0	15	after 6 months
F2	35	3	2	12	—

Code: 3 = much improved
2 = moderately improved
1 = slightly improved
0 = no change
Note: No patients were worse after treatment.

of deviant behavior. The motives for his behavior were rationalized elaborately. This patient illustrates some of the difficulties in the treatment of transsexualism which will be discussed later.

As a rule improvement in deviant behavior closely followed events in treatment. Aversion was associated with a particular activity, so that activity lost its pleasurable quality, and diminished in frequency. Occasionally some part of the deviant behavior diminished before it had been treated directly, although never before some other segment of the behavior had been treated. For example, the boot fetishist with masochism was given aversion only to sexual arousal associated with boots; improvement occurred not only in the fetishism but also in the associated masochistic behavior even though the masochism had not yet been treated. However, in a transvestite who showed pronounced transsexualism, masochism did not improve when the transvestism was treated and, instead, only disappeared later when it was treated directly. Aversion treatment has shown that in any given patient some deviant behavior patterns appear to be primary and others secondary, but there

is no consistency among different patients as to which patterns are primary and which are not.

Follow-Up

Shortly after discharge, all except two patients still experienced occasional deviant thoughts, but these were usually transient and accompanied by little sexual feeling. One transvestite said: "As soon as I thought of cross-dressing it just went; I was surprised. I had expected sexual arousal but there wasn't any." In some patients there was direct evidence of aversive conditioning in that the deviant thoughts were spontaneously associated with unpleasant memories of treatment. For example, one patient thought of trying to cross-dress, then suddenly remembered his aversion in the hospital ward; this dispelled the thought and the erection and such thoughts did not recur. In another patient, the thought of a particular garment evoked the memory of past shocks to the arm and again the deviant thought disappeared. As already noted, most patients did not develop a phobia of their previous deviation, but rather showed diminished desire or neutral feelings towards the deviant situation. Only two patients lost all their deviant thoughts completely. Deviant fantasies accompanied masturbation at some time in seven patients, and five patients actually cross-dressed again at least once, usually with anxiety or less pleasure than before. Only two of these five patients resumed cross-dressing with a frequency similar to that before treatment.

Fourteen patients have been followed for at least six months (Table 2). Of these, four patients have relapsed significantly. Two were transvestites with definite transsexual feelings. Both relapsed within two months of discharge, one retained no therapeutic gains at all, the other had a return of strong transsexual desires though he did not cross-dress again and did not again experience the masochism which had disappeared during treatment.

Heterosexual Behavior

One of the theoretical dangers of aversion treatment is that it may not only remove abnormal sexual desires but also, by generalization, decrease normal heterosexual feelings and even produce impotence. This did not occur in any of our cases after discharge from the hospital, although one patient experienced temporary delay in reaching ejaculation in intercourse when at home for the weekend during treatment. If a change did occur following the treatment, it was a heightened heterosexual feeling and performance. The change in heterosexual behavior can only be properly assessed when the level of performance before admission is taken into account.

Patients varied greatly in their heterosexual adjustment before admission and this had no consistent relationship to the frequency with

which they practiced their sexual deviations (Table 3). Ten patients had had regular sexual intercourse with their wives or girl friends before admission; seven of these used to have intrusive deviant thoughts at the time. Two of these ten patients did not return for follow-up. Of the remaining eight, no patient showed a decrease in performance after treatment and three showed a slight increase in frequency and enjoyment—two of these noted that their relationships with their wives had improved. Before treatment, two transsexual patients had occasional heterosexual intercourse to satisfy their partner but did not enjoy it. Of these two, one did enjoy sexual intercourse more in the first year after treatment, while the other reported no change. Before treatment, one patient had regular intercourse with his mistress but could not reach ejaculation at times. Before treatment seven patients had not had intercourse: of these, three had petting experience, the rest only heterosexual

Table 3
Outcome of Heterosexual Behavior in Each Patient

Number	Age	Marital Status	Code Number* and Activity: Before Admission	Code Number* and Activity: End of Follow-up	Duration of Follow-up (Months)	
Uncomplicated transvestites						
TV1	21	S	4 Petting	5 None	22	
TV2	33	S	4 Petting rare	4 Petting	19	
TV3	22	S	4 Petting rare	4 Petting	13	
TV4	34	M	2 Occasional SI	1 Frequent SI	12	
TV5	26	M	2 Occasional SI	Missing	—	
TV6	35	S	5 None	5 None	8	
TV7	43	M	1 Regular SI	1 Regular SI	8	Marriage improved
TV8	36	S	4 Petting	3 Heavy petting	7	
TV9	22	S	1 Occasional SI	not known	2	
TV10	32	M	1 Regular SI	1 Regular SI	3	
Transvestism with transsexualism						
TS1	38	M	2 Regular SI	1 Regular SI	15	
TS2	26	M	1 Regular SI	Missing	—	
TS3	32	M	2 Occasional SI	2 Occasional SI	20	Marriage improved
TS4	36	M	1 Regular SI	1 Regular SI	9	Marriage slightly improved
TS5	50	M	5 Past SI none	5 None	4	
Sadomasochism						
S1	57	M	2 Infrequent SI	1 Regular SI	6	Marriage improved
S2	18	S	5 None	5 None	7	
S3	20	S	5 None	3 Petting	2	
Fetishism						
F1	35	M	2 Regular SI	2 Regular SI	15	
F2	35	S	3 Occasional SI	2 SI with ejaculation	12	

SI = sexual intercourse
* Sexual activity coded on a scale from 1 (normal performance) to 5 (no heterosexual activity).

fantasies. Only two of these seven patients showed any increase in overt heterosexual activity after discharge, though most described increased heterosexual desire and fantasies during masturbation. No patients had pronounced homosexual desires before or after treatment though three had had transient experiences or fantasies at some stage before admission. In two transsexual cases marital disharmony, which had been present for many years, continued unchanged after discharge despite the absence of deviations on return home. However, the marital friction improved gradually when social casework was undertaken with the two couples. The course of the deviation had little relationship to that of the marital problem.

Results for Each Type of Deviation Considered Separately (Table 4)

Simple Transvestism. Ten patients were transvestites without any other deviation. Nine were rated much improved by the end of treatment and the tenth was improved. Seven of the ten patients have been followed for at least six months and six retained their improvement—the one patient, who had not improved until toward the end, continued

Table 4
Results of Treatment in Each Type of Deviation

Patients	Results Code	On Discharge	Patients Who Have Reached 6 Months Follow-up
All patients	MI	18	8
	I	1	2 (1 TS)
	NC	1 (TS)	4 (2 TS)
			2 missing
			(4)*
Transsexuals	MI	4	1
	I	0	0
	NC	1	2
			1 missing
			(1)*
Uncomplicated transvestites	MI	9	6
	I	1	0
	NC	0	1
			1 missing
			(2)*
Sadomasochists	MI	5	3
	I	0	0
	NC	0	1
			(1)*
Fetishists	MI	2	1
	I	0	0
	NC	0	1

MI = much improved, i.e., deviant behavior absent or rare
I = improved, i.e., deviant behavior infrequent, less than before treatment
NC = no change
TS = transsexual
* Followed up less than 6 months.
Note: No patients were worse after treatment. In patients with more than one deviation, each deviation was counted separately.

to improve further after discharge and was rated much improved at seven months follow-up. One patient did not return for follow-up and his fate is unknown. Results appeared therefore encouraging in patients with uncomplicated transvestism.

Transvestism with Pronounced Transsexualism. Transvestism was combined with strong transsexual feelings in five patients. One, who has already been mentioned, showed very little change by the end of treatment. The other four all improved considerably at the end of treatment. One of these failed to return for follow-up and his fate is unknown. Two of the three who returned for follow-up relapsed, both within two months, the relapse being unassociated with any obvious external stimuli. The third had a temporary relapse after one year. There was little to suggest that the five transsexual patients differed from the transvestites in any way other than their type of deviant behavior pattern.

Detailed analysis of the five transsexual patients is given (Table 5). As children, all five patients had either been dominated by or were more closely attached to their mothers rather than fathers. In none of the cases had the parents preferred a girl to be born rather than the patient, and in only one case did the mother dress the patient in girl's clothing. Only in this case did the transvestism and transsexualism actively begin in childhood, and this was also the only case that showed no improvement by the end of aversion treatment. All patients had, at one time or another, sexual arousal from their cross-dressing; only two patients had repeated normal heterosexual intercourse; none was homosexual.

Sadomasochism. One patient had solely sadistic fantasies; two patients had sadomasochistic fantasies and practices. One patient nearly strangled himself several times. At the end of treatment, these three patients had lost nearly all deviant feelings and they continued well at follow-up, but only two have been followed for as long as six months.

Two other patients presented with masochism associated with another deviation. The first was the boot fetishist in whom masochism disappeared when his fetishism had been treated. This patient's fetishism returned nine months after treatment, but the masochism did not reappear for six more months. The second patient's masochism had not returned a year after discharge, but his transsexualism returned two months after treatment.

Contrary to expectation, sadomasochistic behavior has responded encouragingly to electric-shock aversion treatment. In no case treated so far have the electric shocks become another source of masochistic pleasure, though this hazard clearly must still be watched for carefully in future patients.

Fetishism. The boot fetishist began to relapse slowly after six months; the patient with a fetish for lame women remained well six months after treatment.

Table 5
Five Transsexual Patients

Number	Treatment Age Years	Onset TV Age Years	Established TS Age Years	Father	Mother	Parents Wanted a Girl	Cross-dressed as Child	Masturbated with Cross-dress	SI	Marital Status	Personality
1	36	14	18		dominant	no	no	yes	yes	married	isolated
2	26	18	25		closer to patient	no	no	rare	yes	engaged	normal
3	32	14	14	absent from 3	closer to patient with 5 sisters	no	no	rare	yes	married	normal
4	36	12	26		closer to patient	no	no	yes	yes	married	shy
5	50	6	6		dominant with 2 sisters	no	yes	rare	yes	divorced	normal

TV = transvestism
TS = transsexualism
SI = sexual intercourse

Other Changes After Treatment

As noted, after aversion treatment had improved deviant behavior, there was often some increase in heterosexual desire, but improved performance appeared mainly in those patients who had previously had regular heterosexual partners. In those patients who had had no heterosexual experience before treatment, the increased desire after treatment led to only slightly increased overt heterosexual behavior, because of their marked social inhibitions. In three of these seven patients, shyness was part of a pronounced personality disorder. Two of them have been referred for group psychotherapy. Aversion therapy can diminish deviant behavior but, by itself, it cannot help patients to develop a normal heterosexuality; insight psychotherapy is indicated in selected cases.

In our patients there was no consistent relationship between normal and abnormal sexual outlets. Some patients had almost solely deviant outlets; others had normal and deviant outlets, with almost equal frequency. Frequent and satisfying sexual intercourse did not usually diminish the desire for the abnormal sexual behavior. One patient had regular intercourse after treatment when well and after partial relapse. When another patient relapsed, he noted that half an hour after enjoyable intercourse he would again wish to don women's clothes, though his desire for heterosexual intercourse had temporarily abated. When some patients were unhappy for some reason, their deviant sexual feelings increased. However, in other patients, deviant desires ran a course which was independent of their life problems. Only one of the patients, the boot fetishist, showed a lasting increase in any symptom when his sexual deviation improved. He complained of mild irritability and lack of creative ability for six months after discharge, despite satisfying sexual intercourse two to three times weekly. He then relapsed partially and resumed masturbation with some of his deviant fantasies; at the same time he said he felt more contented and regained his zest for living. His pre-relapse irritability could have arisen from the incomplete suppression of his sexual deviation which resulted in irritability when residual drive and libido properties were not gratified. It is well known that patients with fetishism and transvestism characteristically experience abnormal desires when a mounting urge produces tension which is relieved only when the abnormal desire is indulged.

A potential danger one might expect from aversion treatment is that other deviant patterns may develop when deviant satisfactions are removed, unless patients have heterosexual outlets to take their place. This did not occur. Those patients who had no overt heterosexual outlet after treatment masturbated with heterosexual fantasies. The only patients who felt frustrated for any length of time and felt worse after treatment were the two transsexual patients during the relapse period. Both these patients had regular sexual intercourse during the time that

they felt frustrated so that their frustration was not due to any damming up of general libido, but presumably to blockage of the deviant drive which had been temporarily suppressed and was now striving for expression once more.

It was noticeable in several patients who had marked problems other than their sexual deviation that, once their sexual deviation improved, they became more concerned with these other problems. For example, a transvestite who improved after aversion was left more aware of his long-standing inability to develop any intimate relationship with either sex.

Emotional Reactions to Treatment

These have been discussed in detail by Marks and Gelder (1967). They are less relevant to our present theme and will be dealt with briefly.

Aversion therapy is an unpleasant and occasionally painful treatment. A variety of psychological observations indicates that repeated painful stimulation evokes aggression (Rachman, 1965) and it might be anticipated that aversion therapy would provoke comparable emotional responses in patients. Such changes have been observed both with apomorphine aversion therapy (Morgenstern, Pearce and Davies, 1963; Lavin, Thorpe, Blakemore and Conway, 1961) and with electrical aversion therapy (Schmidt, Castell and Brown, 1965). Most of our patients showed some anger, especially when they were slow to remove their garments and therefore received more than one shock per trial. Usually, this anger was at first directed to the therapist. One patient said: "I am getting into a state. I'm getting angry, but I'm not sure whether I'm angry with the shoes or with you." If these feelings are watched for carefully, and interpreted promptly when they occur, patients do not continue to project their anger on to the therapist, and the treatment can continue. Otherwise it may lead to the patient's leaving treatment. Ulrich, Hutchinson and Azrin (1965) have reviewed the variables which determine the amount of pain which elicited aggression in animals. They conclude that it is greater when more shocks are given (which agrees with our clinical evidence); when shocks last longer; and when they are given with greater regularity. They also report that shocks of intermediate intensity result in more aggression than very weak shocks or very strong ones. Social isolation also favored the development of aggression. It is unlikely that aggressive feelings can be prevented completely although once they have appeared, they can be dealt with in the same way that angry feelings are dealt with in a psychotherapeutic interview.

Anxiety and depression also appeared in the course of aversion therapy. The problem has been dealt with in detail elsewhere (Marks and Gelder, 1966).

Conclusion

Clinical observations indicate that faradic aversion therapy is a valuable treatment for patients with transvestism, but is less useful in patients in whom transsexualism is pronounced. Detailed study of the changes induced by aversive stimuli shows that the psychopathological phenomena of the transvestite (sexually arousing fantasies and erectile responses) are especially susceptible to treatment.

These findings, taken with the lack of motivation for psychic change shown by most transsexuals, indicate that current aversion therapy methods are unlikely to be of help to many of these patients. However, more important than mere negative findings on aversion treatment when applied to transsexualism are the findings that throw light on the complex psychopathology of patients with related transvestic disorders, which help to establish which of the many symptoms shown by these patients are primary and which depend on the presence of other abnormalities. Thus in transvestites who had minor degrees of transsexual longings, these latter abnormalities disappeared when the urge to cross-dress subsided. They appeared, therefore, to be secondary to the transvestic behavior patterns. Treatment directed to the cross-dressing behavior of patients with marked desires for sex-change did not affect their transsexualism except temporarily. Thus some behavior patterns may be secondary to other established patterns, while others may be primary.

At present, these ideas are speculative, but our small series of patients has shown how aversive methods can be combined with careful assessments of psychological changes and used to explore the complicated interrelations between different disordered patterns of sexual behavior. Much more must be done before these interrelations are fully understood, and more solid evidence of lasting success is needed before this unpleasant treatment can be adopted more generally.

Summary

Faradic aversion techniques have been applied to the treatment of transvestism and transsexualism. Unpleasant electric stimuli are delivered to the patient's forearm both as he imagines himself performing the unwanted deviant behavior, and as he practices the deviation.

Ten transvestites with no other major deviant behavior and five transvestites with pronounced transsexualism were treated. Nine of the uncomplicated transvestites were rated "much improved" at the end of treatment and the tenth was "improved." Seven of them were followed for at least six months and six out of these retained their improvement. Four of the transvestites with pronounced transsexualism were improved considerably at the end of treatment. One failed to return for follow-up. Two of the three who did return had a relapse, both within two months. The third one had a temporary relapse one year after the treatment's end. Other deviant patterns of sexual behavior did not replace the deviant behavior eliminated by aversion treatment.

APPENDIX TO CHAPTER 27

BRIEF CASE HISTORIES OF TRANSSEXUAL PATIENTS

Patient One

A married executive, who first remembered interest in women's clothes at the age of six, sought treatment because he was beginning to be tempted by the clothes of his teenage daughter.

During his childhood his mother had ruled the home and dominated the patient more than she did his normal brother. There was no evidence that his parents wished for a girl when he was born, nor that he was dressed in girlish clothes. He began to dress and feel sexual excitement at the age of fourteen. From the age of eighteen he had fantasies of changing into a woman and of being tied up and whipped. He often cross-dressed at home. He married at twenty-five and had infrequent sexual intercourse with his frigid wife. He had previously had psychotherapy and later apomorphine aversion at another hospital. The transsexual desires were accompanied by bouts of depression. When admitted he was asked what was his main trouble and replied: "I think I'm the wrong sex. If there was an easy operation to change my sex and if there were no friends or family who would be upset by such a change, then I think I'd be happier as a female."

He had twenty-five sessions of faradic aversion, each lasting one to two hours and carried out twice daily. Aversion therapy was given to deviant behavior both in practice and in fantasy. As each garment was dealt with so his attitude to it became devalued and he was less aroused sexually. After two weeks of treatment he was discharged, having improved markedly although the erections associated with the various deviant stimuli had not been extinguished completely and no repression of fantasies had occurred during treatment. Within a few days of discharge the patient gradually felt transsexual desires again. Ten more aversion sessions were given to him as an outpatient over the next two months. The desires to be tied up were now extinguished completely, but the transsexual ideas improved very little and would recur a few hours or days after the end of each session. Treatment was then terminated.

Over the next seventeen months the patient's condition was unchanged. The masochistic desires never recurred and he never cross-dressed again. However, he had repeated desires to cross-dress and experienced such fantasies during masturbation. He had urgent transsexual longings and envied women who had the kind of body he desired. As before admission, this envy was followed by episodes of depression. Normal sexual intercourse with his wife continued. His relations with his family were unchanged, and he continued to work normally. In this patient there was no evidence, except for transvestism, of misplaced gender identity in childhood nor were there events which could be construed as conditioning episodes. Whereas transvestism began in childhood, transsexual and masochistic ideas developed afterwards in late adolescence. Heterosexual function was infrequent. After treatment, the masochistic ideas were eliminated completely, the transvestic ideas

partly, and the transsexual ideas not at all. Periods of depression, associated with the transsexualism, continued.

Patient Two

A taxi driver, aged twenty-six, had put on women's underwear since the age of eighteen. He was persuaded to seek treatment by his fiancée when she discovered him cross-dressing. While in the Air Force, aged nineteen to twenty-one, he wore girl's panties, and thereafter girl's nightdresses. At the age of twenty-five he saw a female impersonator on television and began cross-dressing completely with little erotic sensation but with a feeling of comfort. He began to think of himself as a woman. On admission he expressed a great desire to become a woman physically.

The parents of this patient were both almost completely deaf. He had a close relationship to his mother and was accused by several girl friends of being a mother's boy. He had three prolonged relationships with girls from which he always withdrew when marriage seemed imminent. His girl friend at the time of treatment was a married woman with a legal separation from her husband, from whom the patient wished to escape but did not know how. The patient had regular heterosexual intercourse with his girl friends and claimed satisfaction.

He received aversion treatments, twice daily, directed to his deviant behavior both in practice and in fantasy. After eighteen sessions his transvestic and transsexual fantasies diminished markedly. No repression of fantasies occurred. He then received three further aversion sessions in the next ten days as an outpatient. During this time he did not cross-dress although he was tempted to do so, and he had transsexual thoughts on one occasion. He broke with his girl friend at this time. This patient did not reappear for follow-up, and could not be traced despite extensive inquiries.

This patient had an unusually close relationship with his mother, but showed little overt evidence of disturbed gender identity until adult life. Transvestism appeared first in late adolescence, without any erotic quality, and the transsexualism appeared later, at the age of twenty-five. In addition, he was afraid of marriage, though was capable of normal heterosexual relations. Aversion treatments led to rapid decrease in both the transvestism and transsexualism. No follow-up is available.

Patient Three

A thirty-two-year-old farm laborer with transvestic and transsexual feelings since the age of fourteen sought admission when his wife threatened to leave him. Aged ten to twelve, he would dress in his mother's old clothes for family games which they called "backyard concerts." Two years later he felt different from other boys and often wished he were a girl. Aged seventeen, he began cross-dressing completely with a feeling of comfort but no direct sexual excitement. Three years later a girl who was a friend of his sister gave him a doll as a "present for a joke." This pleased him and he kept the doll in his bed. Aged twenty-two, he married this friend at his mother's suggestion. During courtship and the first year of marriage his transvestism diminished. Sexual intercourse took place regularly at first, but gradually diminished. The cross-dressing feelings returned, and for some years produced sexual arousal. Aged twenty-five, cross-dressing occurred every night, and his transsexual feelings became stronger with desires for pregnancy and for taking over the household tasks. This caused repeated

quarrels with his wife. He ceased working. He disliked his masculine occupation of farm laborer; but retained it because his house was tied to the job. He became depressed, took an overdose of his wife's contraceptive pills, and was admitted to another hospital before entering The Maudsley Hospital in London. When first seen, the patient said "my body cries out to be a woman," and claimed that orgasms during sexual intercourse "seemed to rip my stomach clean out."

When the patient was three or four years old, his father left home and the patient grew up with his mother and five sisters, whom he helped with household tasks. In other ways, he was brought up as a boy.

Nineteen aversion sessions were given on a twice-daily schedule. They were directed to transvestite and transsexual behavior in fantasy and in practice, both of which diminished rapidly during the treatment. The transsexual feelings began to disappear after only one session devoted to transsexual fantasies. By the end of twelve days, the patient expressed disgust at the thought of cross-dressing, lost all his feminine feelings, and felt masculine instead, saying: "It's too good to be true the way I feel now." No depression or fantasies occurred during treatment.

Over the next year the patient had no return of transvestic or transsexual feelings and assumed the masculine role at work and with his family. He enjoyed sexual intercourse more. However, marital quarrels continued as before, and the wife left home several times, which made the patient depressed. Family case work with both partners helped to diminish the friction. A year after discharge, the patient suffered a prolapsed intervertebral disc, but obtained no relief from a cumbersome surgical corset. On the advice of a friend with the same problem, the patient put on his wife's smaller roll-on corset instead. Immediately he experienced a desire to put on all his wife's clothes, and he slept in a nightdress twice. Although he then stopped cross-dressing, his transsexual feelings returned strongly and persisted for several weeks before they subsided without further treatment. When last seen twenty-one months after treatment, the patient had no transvestic ideas, was not cross-dressing, and had but a few transient transsexual feelings.

This patient had grown up in a household of women with an absent father, but developed transvestic and transsexual feelings only at puberty. His transvestism acquired erotic qualities after marriage, and transsexualism became pronounced at the age of twenty-five. It was the dominant disorder by the time he came in for treatment, yet aversion treatment was rapidly effective both for transvestism and transsexualism. He remained well for a year, despite marital problems. His transvestism then returned temporarily, in circumstances suggesting reconditioning; also the transsexualism reappeared temporarily, secondary to the transvestism.

Patient Four

A thirty-six-year-old engineer, with transvestism, transsexualism, and a fetish for women with one leg since the age of twelve, sought treatment when his wife threatened divorce unless he changed.

At the age of eight, the patient used to put both legs in one trouser leg. Aged thirteen, he began to elaborate a ritual in which he bent one leg at the knee, strapped it elaborately and masturbated. By the age of fourteen, this ritual included complete cross-dressing. Aged twenty-six, he developed transsexual feelings and desired a sex-change operation. He continued the ritual and found that he envied women with one leg. He was married at age thirty-three, the marriage being precipitated by pregnancy. His wife

was a depressed, isolated, impulsive woman, and there were many marital quarrels. Yet they had regular and frequent sexual intercourse which satisfied them both.

As a child, the patient's mother pampered him and was closer to him than his father. He was a shy child and was nicknamed "Daisy." He was always dressed in boy's clothes.

During the eighteen days of his stay at the hospital, he had twenty-six aversion sessions directed to his deviation in fantasy and in practice. By the end of the treatment he derived only slight pleasure from his deviation. Repression of fantasies took place during treatment.

Five days after discharge, the patient masturbated while looking at pictures of women with one leg, three weeks later he tried cross-dressing "as a test" but obtained less pleasure than previously. His thoughts about transvestism and fetishism gradually increased. The marital quarrels continued, and his wife was admitted to the hospital for treatment of depression. Three months after his own discharge his wife had to enter the hospital again for removal of a nontoxic thyroid adenoma. The patient then relapsed completely. Regular marital casework with joint interviews was carried out. This resulted in the cessation of quarrels and an improved marital relationship. However, the deviant behavior continued and was still present when the patient was last seen six months after treatment.

This patient's fetishism began in childhood, transvestism at puberty, and transsexualism only at the age of twenty-six. Heterosexual intercourse occurred, but the marriage was unhappy. Aversion treatment produced marked immediate improvement in the fetishism and transsexualism, but the patient relapsed completely within three months of discharge. The marital friction improved after social casework was instituted.

Patient Five

A fifty-year-old divorced man, whose transsexualism began in childhood, sought treatment as a last resort before asking for an operation to change his sex. As a child he used to play often with his mother's clothes; by the age of eight, he would often wear women's shoes and clothes, with the connivance of his mother. After puberty, the cross-dressing produced erections, but he did not masturbate. Puberty occurred at the age of seventeen. The patient had partially descended testes. At the age of twenty-five he married, but did not reach orgasm until a year later, and even then sexual arousal during intercourse had to be sustained by thoughts of cross-dressing. He had two sons. Throughout his marriage he wore women's stockings and shoes when he could. At one stage, orgasm was difficult to achieve and was reached only when he tied himself to a chair and tipped it up until he fell to the floor. He was treated with psychotherapy at the age of thirty, and again by another psychiatrist when he was thirty-three. Aged thirty-five, he received stilbestrol which caused breast enlargement. Aged thirty-eight, he was divorced.

During his childhood, the patient and his father were dominated by his mother, and he shared many activities with her and his two sisters. He remembers that he was often hugged tightly by his mother. As a young man he had a rich intellectual and social life, and had several affairs in which he had sexual intercourse to please the woman.

For six months before admission he lived as a woman on the advice of a psychiatrist before a final decision was made about a sex-change operation. Two weeks before admission he had further implants of stilbestrol to femi-

nize his body. He received twenty-one sessions of aversion treatment. He only allowed shocks to be given while he thought about and put on women's shoes and stockings, and refused aversion to other important aspects of his deviant behavior. No repression of fantasies occurred during treatment. His feelings did not change significantly by the end of treatment, and at follow-up three months later he was continuing to live as a woman.

This patient was the most extreme transsexual in our small series; his problem started in early childhood, with the transvestism never being associated with an erotic component. He was very ambivalent about treatment and would allow only an incomplete form of treatment. Even the small segment of his behavior which was treated has changed only minimally.

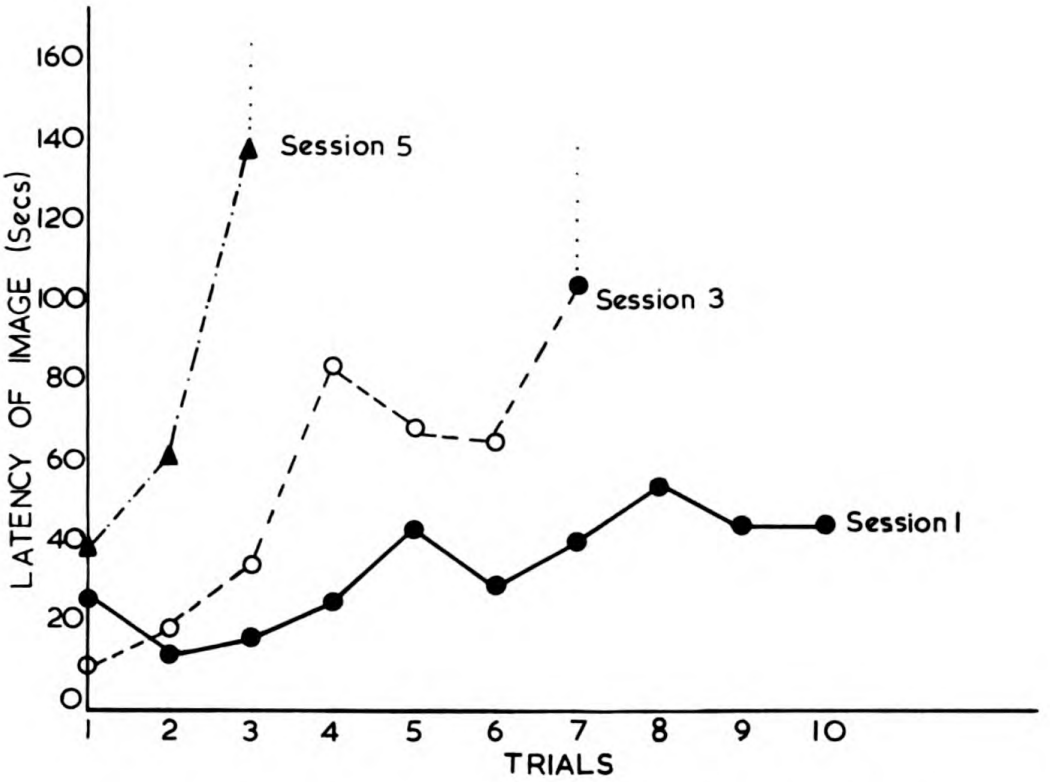

FIGURE 1. Latency of fetish images in successive trials of shocks to fantasies.

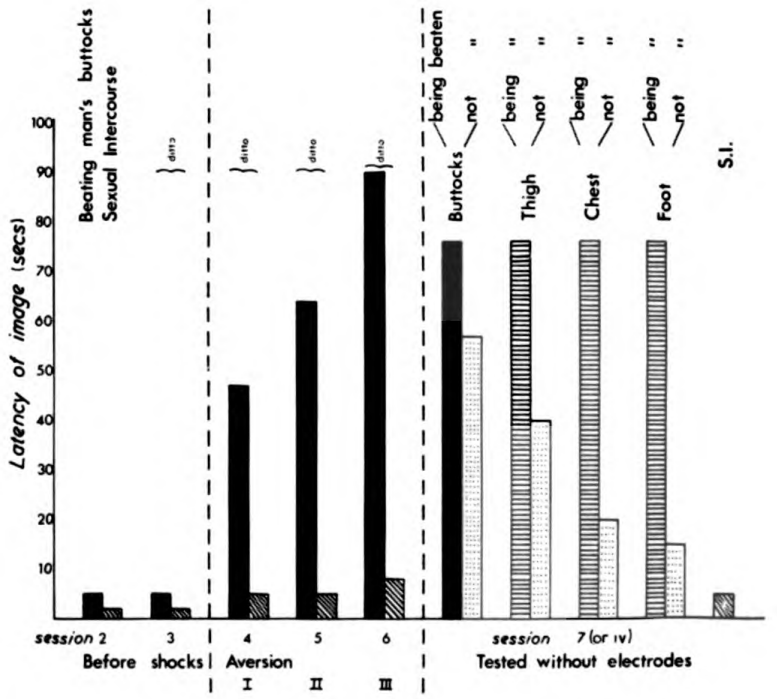

FIGURE 2. Repression-generalization gradient (anatomical).

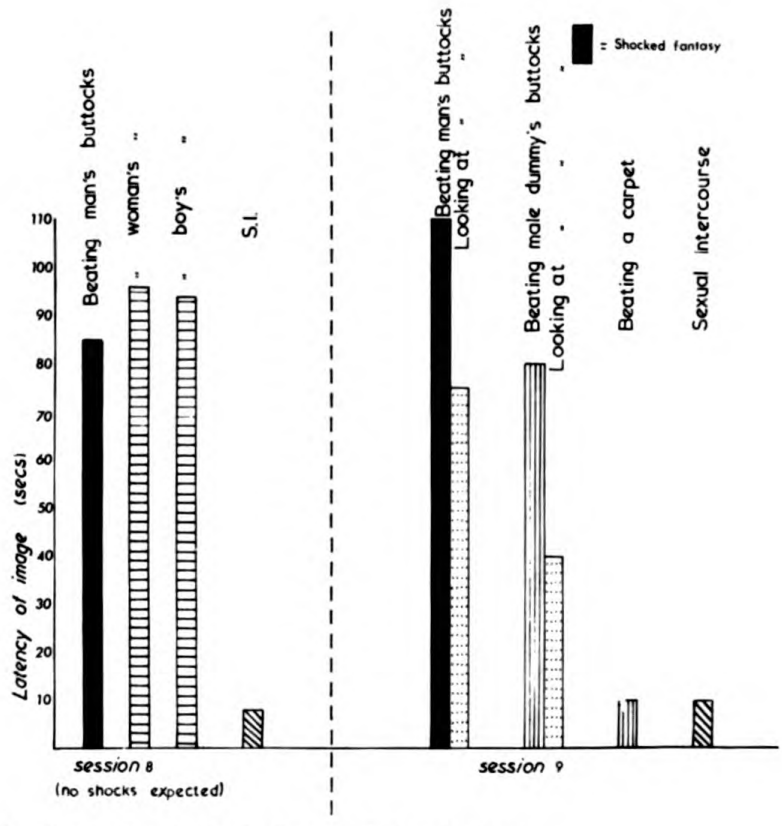

FIGURE 3. Repression-generalization gradient (sadistic).

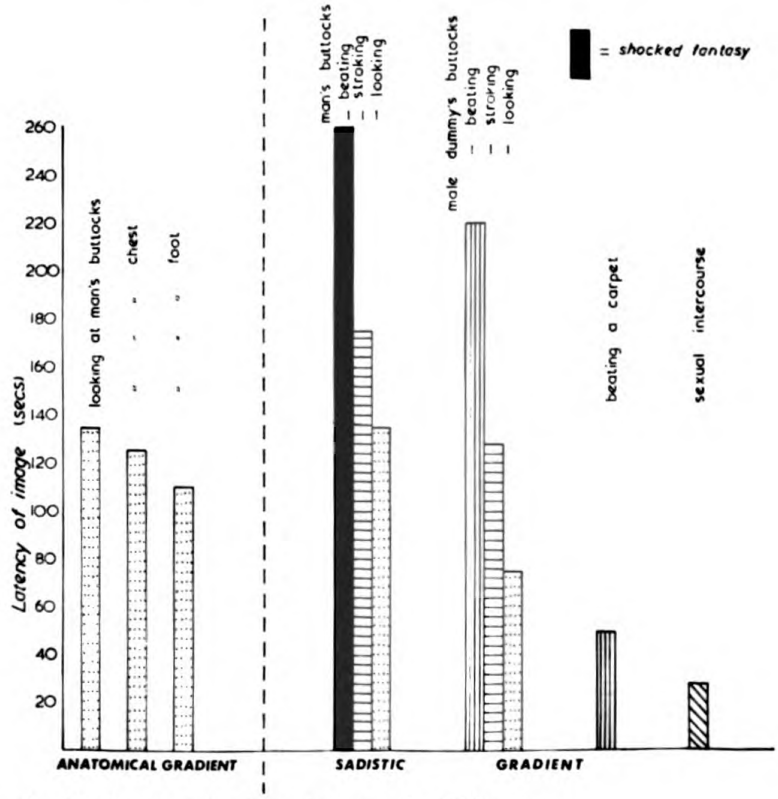

FIGURE 4. Persistent repression: four-months followup.

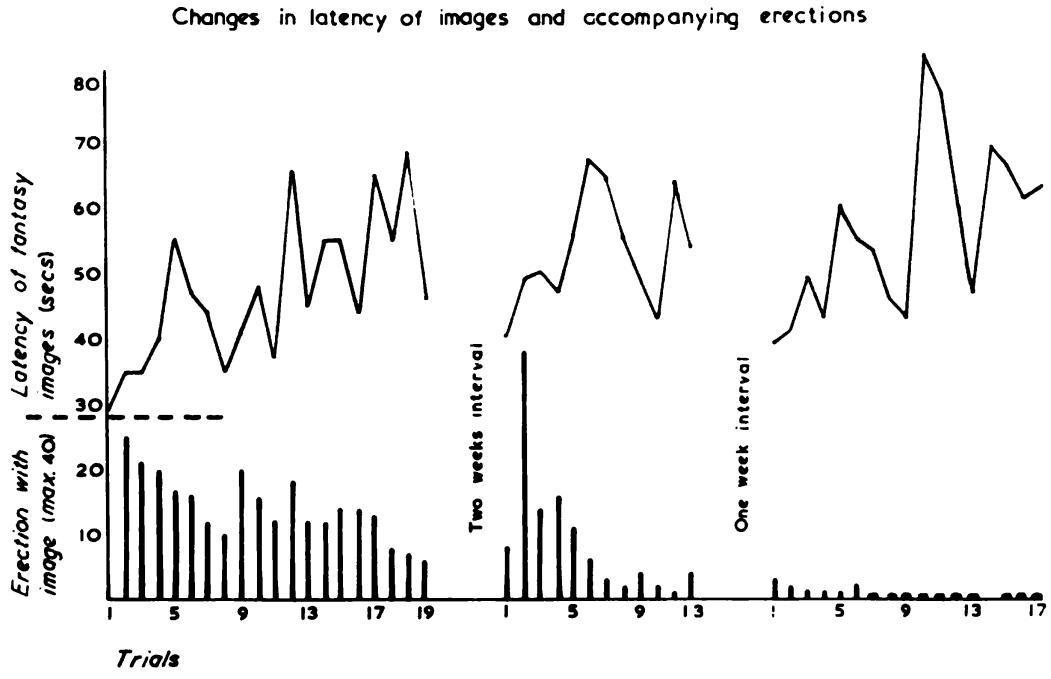
Changes in latency of images and accompanying erections
Latency of fantasy images (secs)
Erection with image (max. 40)
Two weeks interval
One week interval
Trials

FIGURE 5. Fantasy "being tied up" during aversion treatment: changes in latency of images and accompanying erections.

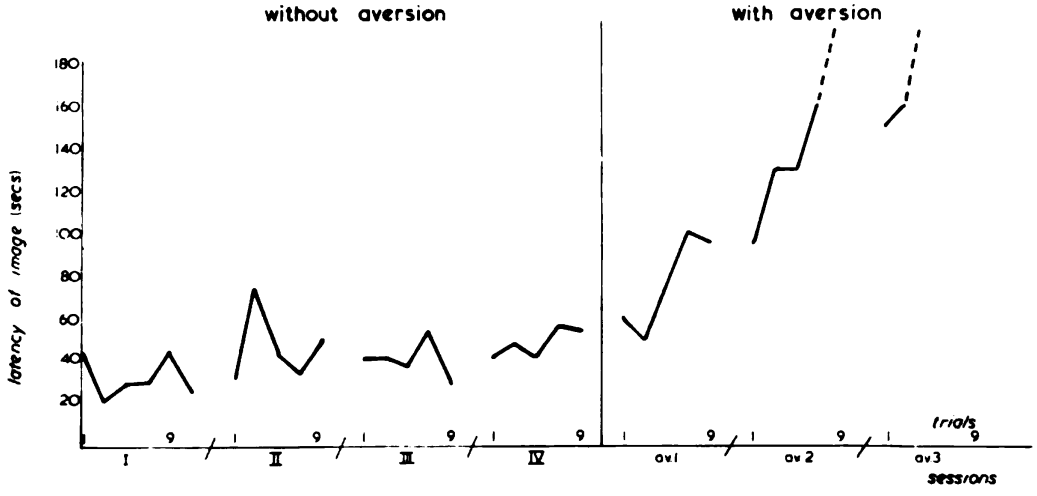

FIGURE 6. Change in latency of fantasy image "putting on stockings."

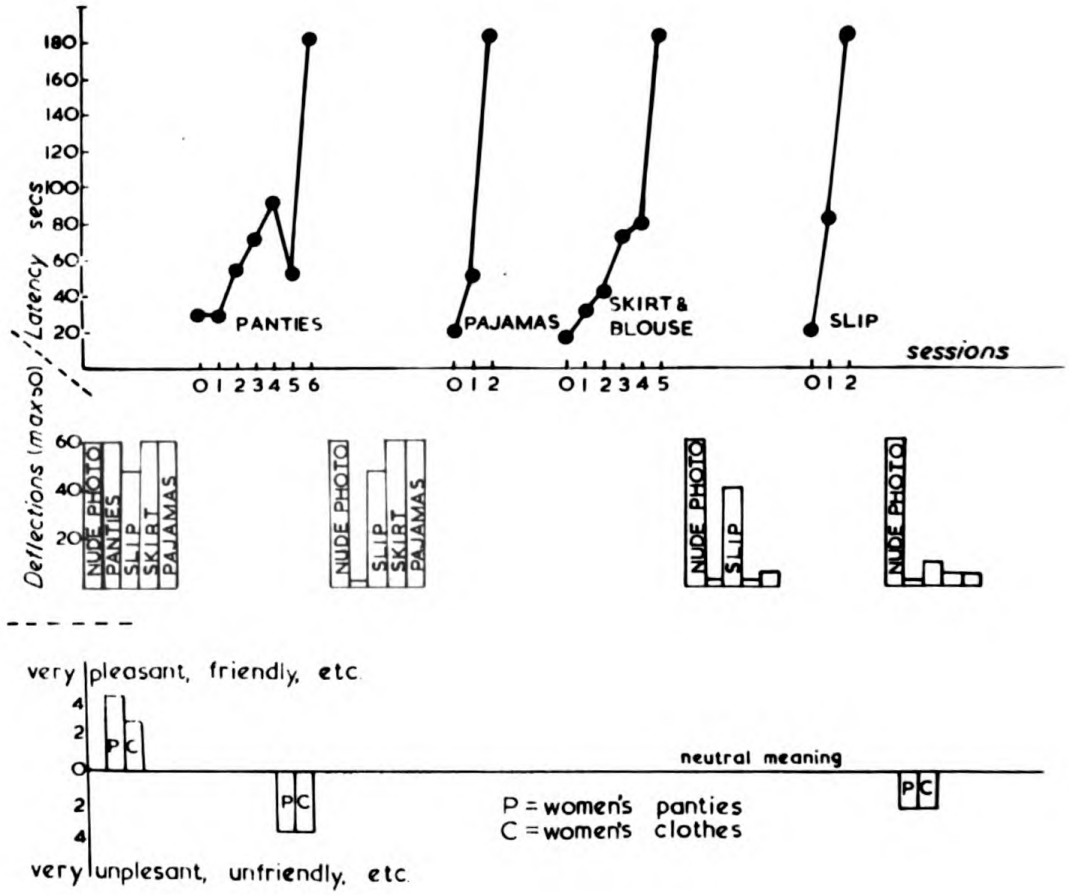

FIGURE 7. *Top*: Erection latency at end of each aversion session. *Center*: Erections after one minute exposure to stimulus. *Below*: Evaluation of concepts during aversion treatment.

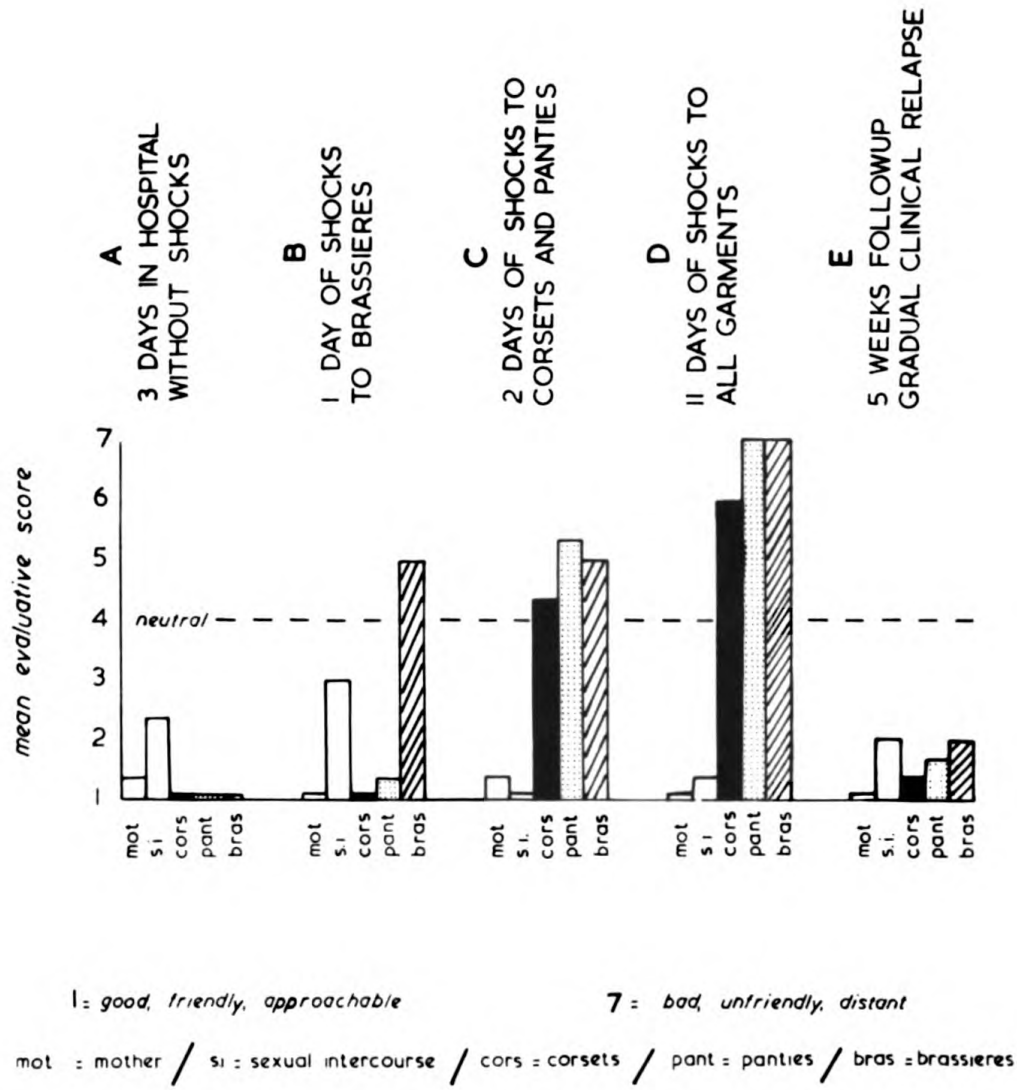

FIGURE 8. Evaluative change with selective aversion.

PART V

MEDICOLEGAL ASPECTS OF TRANSSEXUALISM

CHAPTER 28

LEGAL ASPECTS OF MALE TRANSSEXUALISM

Robert Veit Sherwin, LL.B.

INTRODUCTION

Dr. Harry Benjamin says in the preface to *The Transsexual Phenomenon* (1966): "There is a challenge as well as a handicap in writing a book on a subject that is not yet covered in the medical literature. Transsexualism is such a subject."

A similar situation exists when one attempts to describe the legal aspects of transsexualism. As a matter of fact, the problem, in many senses of the word, becomes even more aggravated and complex because the behavior of the transsexual resembles often certain forms of behavior that are defined as a crime by our criminal statutes. For example, in many jurisdictions (sometimes under the Vagrancy Statute,[1] sometimes under the Disorderly Conduct Statute), inpersonating a female or masquerading as a female makes the male subject to criminal prosecution. Thus a transsexual appearing in public as a female prior to a sex-reassignment operation[2] may be, and has been, arrested under such statutes. Convictions have been obtained against transsexuals despite the fact that there is one very essential difference between the ordinary masquerader and impersonator and the transsexual. The ordinary male who impersonates or masquerades in public may do so in order to cause a disturbance, to commit a fraud, or whatever other reason that he may have in mind, but the main point is that he is impersonating or masquerading *as* a female. The transsexual appears dressed as a female

[1] Basically speaking, the Vagrancy Statute covers the vagrant defined as a person without visible means of support or known residence. The term "vagrant," however, has often been broadened in many jurisdictions to cover a variety of persons and behavior. For example, the prostitute is covered by the Vagrancy Statute in many jurisdictions.

[2] The words "sex-reassignment operation" refer to the entire procedure in changing a person's sex including the hormone treatment as well as the genital operation.

because he feels he *is* a female and under no circumstances is he, in the psychological sense of the word, impersonating or masquerading.

Since the science of law and criminal administration is often some forty or sixty years behind the other sciences, the practice of applying an inappropriate law or statute to a given situation is most common. For example, a wife who becomes artificially inseminated without the knowledge or consent of her husband is clearly committing a wrong against her husband. Since he is an equal partner to the marriage contract and since he will be obligated to support a child born to his wife during the marriage, his consent should be required prior to the insemination. But to judicially fantasize that the introduction of the syringe into the wife's vagina as applied by her physician constitutes an act of infidelity on her part, and thus to grant the husband a divorce on the grounds of adultery, does not seem to be an intelligent way of solving the problem. And yet, a court has so held in several jurisdictions.

An even more extreme illustration is the use of Section 887, Subdivision 7,[3] of the New York State Code of Criminal Procedure, as it is being applied against the transsexual. This statute was created one hundred years ago in order to punish farmers who attacked officers of the law attempting to enforce unpopular rent laws. In order to avoid detection, the farmers would disguise themselves as Indians while attacking the police. This statute therefore made it a crime to appear with a face painted, discolored, or covered, or concealed, or being otherwise disguised in a manner calculated to prevent identification. By distorting the meaning of the statute and disregarding its original purpose, this statute has been used to arrest and convict the transsexual who has appeared in public in female attire and makeup.

This chapter concentrates on an analysis of the various legal problems facing the transsexual. Suggestions for solutions to some of these problems are outlined here, but one must be forewarned that these solutions are merely the suggested rather than the tried ones.

Therefore, since at the present time answers are few and problems are many, the majority of the materials discussed here will be devoted to prevention of a conflict with the law. The transsexual, having no appropriate law to live by, must learn to live without the law, and above all, to avoid becoming entangled with an inappropriate law.

The Beginnings

Elsewhere in this volume, definitions of the terms "homosexual," "transvestite," and "transsexual" are supplied, and differences between all three are explained. A transsexual may live out his whole life without

[3] Section #887, subdivision 7, of the New York State Code of Criminal Procedure: "A person, who, having his face painted, discolored, covered or concealed, or being otherwise disguised, in a manner calculated to prevent his being identified, appears in a road or public highway, or in a field, lot, wood or inclosure."

ever acquiring this basic information. The intense desire on the part of the male transsexual to live and be accepted as a female often causes the transsexual to jeopardize his safety and that of his immediate family. Confused as to his own identity and as to what ails him, he may often suppose that he is a homosexual. He may thus indulge in homosexual behavior, though without true satisfaction to himself, causing himself to be arrested, indicted, and convicted under the homosexual statutes. Most law enforcement officers, equally unaware of the differences between the homosexual, the transvestite, and the transsexual, are perfectly content to arrest, indict, and convict upon what would appear to be homosexual behavior despite the fact that, though the act may seem similar, the actor is quite different.

It should be obvious that a male dressing as a female in order to avoid detection and recognition while robbing a bank is quite different from the male who may dress as a female because of a psychological need to live as a female. The crime of the male in the first illustration is clearly that of robbing a bank. Dressing as a female is merely a fraud indulged in to accomplish the crime of theft. Irrespective of any apparent logic, quite recently the U.S. Supreme Court refused to hear an appeal of a man well-respected in a large community, who had been convicted simply of wearing female attire while walking one block from his home late at night even though the local police officer admitted, under oath, that the man was not engaged at the time in any immoral or criminal activity beyond his being in female attire. The emotional intensity that often pervades the administration of law in sex offense cases is often tantamount to hysteria, and it frequently shows a lack of any basic logic. Ordinary rules of justice are ignored in the ofttimes well-meant attempt to be on the side of the law. For example, the use of entrapment by plain-clothes policemen[4] is unconstitutional under both federal and state laws, and yet many thousands of homosexuals have been convicted in many hundreds of jurisdictions by the use of entrapment. In the few instances where the attorney dared to defend these clients by proving the use of entrapment, the only result seems to have been a more severe penalty for the defendant.

As time goes on, the transsexual may discover that he is neither a transvestite nor a homosexual. He therefore refrains from illegal soliciting and other clearly homosexual behavior. He may learn that there is no statute that specifically deals with the transsexual as such, and as a result he may develop a false sense of security that his freedom to be a transsexual is safeguarded. He soon discovers that, although there is no

[4] Entrapment as used to apprehend homosexuals is a particularly onerous and pernicious practice because it relies on two basic characteristics of the homosexual, his loneliness, and his basic guilt which often causes him to purposely jeopardize himself in such a way that he will be arrested and thus punished.

specific statute devoted to transsexual behavior, other completely inappropriate statutes[5] can be, and are, converted to fit his behavior.

In order to obtain a conviction, the police officer will bend as many statutes as possible to apply them to the transsexual's behavior, regardless of the fact that none of the statutes selected might be relevant in any way to the problem of transsexuality. In many cases the transsexual will not obtain legal aid, but will instead plead guilty to what he thinks is a minor offense in order to have the matter over and done with. The first conviction will often be followed by a second, third, and even fourth conviction.

Even though the transsexual is relating to no one at the time of his arrest and attempting neither to solicit as a "female," nor to defraud as a "female," there is no hesitation on the part of the police officer to arrest under the statute of masquerading as a female, which, as has been stated above, requires the element of fraud. Similarly, there is no hesitation on the part of the police officer to arrest under the Disorderly Conduct Statute, despite the fact that the transsexual is in no way being disorderly and does not perpetrate the usual acts which cause the arrest for disorderly conduct. The situation in this respect is so acute that even in cases when the transsexual had on his person a note from his personal physician[6] attesting to his condition, a conviction under the various statutes described above has been obtained.

It would seem, at least to this author, a waste of time to attempt to wait for a change in the law concerning this aspect of the transsexual's life. Since it is important for the transsexual to experience the social, vocational, and financial life of a female directly and before the final irreversible step of reassignment surgery, he has no choice except to accept the consequences if he is apprehended and arrested in spite of behaving with discretion and caution.

The Physician and The Operation

The problems of personal liability facing a physician willing to perform the conversion operation on a transsexual are complex. The finality of the operation itself renders the operating physician vulnerable should the patient later claim that the operation should not have been done in the first place and that the physician should have recognized the fact that the patient was not, in fact, a transsexual, but a homosexual.

[5] The "catchall" statute is especially prevalent in the area of sex and the law. For example, criminal behavior which is described as any act which tends to outrage public decency, and for which there is no other statute, is certainly not described in the terms of specific definition required by the Constitution, and yet the statute still exists in many jurisdictions. The "catchall" statute, therefore, makes it very difficult to predict what kind of behavior might be called criminal.

[6] In addition to the problems facing the transsexual patient, the physician who writes a note for him might risk being called up before an unsympathetic local medical association and censured for improper medical conduct.

In some jurisdictions the physician has been threatened with arrest under the Maiming Statute should he perform the operation—this, in spite of the fact that the courts of feudal England, who were the first to apply the Maiming Statute, specifically stated that injury or amputation of the genitalia did not come under the Maiming Statute.[7] Other laws, as well as rules and regulations of state, county, and city Medical Boards and Associations, could be used to deem improper the behavior of the physician, thus jeopardizing his license to practice.

Legal problems notwithstanding, there has been an important breakthrough which will not only serve to lessen the pressure upon the individual physician but, in addition, will help to shape the law as applied to the life of the transsexual. Certain nationally respected institutions have now entered into research programs concerning the health and safety of the transsexual and his problems. The unimpeachable reputation of these institutions will go a long way toward protecting the transsexual against criminal prosecution. Even more important, the rules and regulations which are being created by these institutions are systematizing the entire procedure, thus creating an atmosphere of "law and order" which will serve to protect the transsexual against himself.

Severing Ties with the Past

Having examined the criminal aspect of the law as it affects the transsexual, we can turn our attention to the more complex phase of the transsexual's civil status. Let us take the situation where a transsexual, prior to his operation, is legally a married man with a wife and children. Let us assume further that the wife is an understanding person who recognizes the need of her husband to live as a female for the remainder of his life. Just prior to the divorce, the usual separation agreement[8] is entered into by the husband and wife. Basically the separation agreement can be like any other separation agreement signed by a husband and wife, with one very vital exception. This exception centers around the custody provisions and the visitation terms of an agreement. In the

[7] The absurdity of this threat to physicians should be emphasized by stating that the maiming statutes were specifically created to prevent the injury of fighting limbs belonging to members of mercenary armies of the feudal lords. In order to deter enlisted men from injuring one another in arms or legs in bar-room brawls, it was made a serious offense to incapacitate a man from service in the army of the lord of the manor. There are several cases on record in the feudal courts specifically stating that injury of the penis does not come under the maiming statutes.

[8] A great majority of divorces are accomplished by default. That is, one of the parties sues the other for divorce in court, and by tacit agreement the defendant fails to answer the summons and complaint, and thus the plaintiff receives the divorce by default. However, prior to this, the parties negotiate a separation agreement which purports to divide up property and to outline visitation and custody privileges. All obligations between the parties which are to survive the divorce action are outlined. It is further stated in the agreement that the terms therein shall be made a part of the divorce decree when obtained.

case of very young children, common sense demands that their father, who is about to become a female, not be granted the usual visitation terms. The problem is not solved by merely omitting the usual visitation and partial custody provisions. An affirmative paragraph prohibiting such visitation should be included in the agreement, both for the protection of the children and to avoid the claim being made that a visitation paragraph was omitted by error. However, since the agreement may become part of a future divorce decree, and in some jurisdictions actually be filed, and thus made, in a sense, a public record, it is important not to violate the privacy of the transsexual by making the paragraph too specific as to reasons why visitation should not be permitted. There follows an example of the type of paragraphs that have been used, both by the author and others, in separation agreements involving a transsexual:

Paragraph A: The wife shall have the exclusive custody of the children of the parties.

Paragraph B: Because of special circumstances known to the husband and to the wife, no specific provisions concerning the husband's visitation rights with the children are contained herein. The husband shall visit the children at such times and upon such terms to which the parties may agree from time to time, providing said terms are consistent with the health, safety, and welfare of the children.

It should be noted that although the above paragraph is intended to protect the children, its vagueness protects the transsexual as well as the children by avoiding possible notoriety that would result from a more specific wording.

One further comment should be made concerning the support provisions of a separation agreement involving the transsexual. The wife must use more than ordinary judgment in making her demands for support in connection with the separation agreement. Although, on the one hand, she must demand as much support as possible for the sake of her children, on the other hand she must recognize two unusual elements in the case where her husband is about to live as a female. Let us say, for example, that her husband, as a male, was a practicing physician, or a college professor, or an engineer. His income, let us say, was in the neighborhood of $15,000 or $20,000 a year. There can be a tremendous drop in earnings in the early period when the husband lives as a female. Problems will arise in achieving for the new female proof of the qualifications which said person had as a male. Suffice it to say, for the moment, that the transsexual will be most fortunate if, as a female, she can earn $5,000 or $6,000 per year, at least for a certain period.

In view of the above, it would be wise for the wife to request a percentage of the husband's gross income rather than a fixed sum. This affords the husband protection during his low earning period following

the operation, and at the same time protects the wife and the children as the husband's income increases.

The second problem facing the wife of a transsexual is when the husband fails to honor the support provisions. In the ordinary case the wife would simply serve the appropriate papers on the former husband and sue him for the arrears. The former wife of a transsexual, however, must be very careful in her judgment when she decides to sue her former husband who is now living as a female. The quite obvious dilemma facing the wife is a very difficult one, to say the very least. Should she purposely deprive her children and herself of needed support by failing to sue for monies owed to her, or should she instead, in obtaining said monies, subject her children and herself to the resulting publicity that such a lawsuit would certainly bring?

It should be said further, concerning the termination of the transsexual's life as a male prior to entering his life as a female, that a change of geographical location is almost mandatory, at least at the present time. The continued association with an employer, such as a university, should be terminated so as to avoid any embarrassment to the employer and at the same time to protect the transsexual from similar embarrassment.

Creating a New Present

One does not realize how often one is required to prove one's own identity until one disowns the past. For very obvious reasons it is necessary for the transsexual to create a new and present identity with as little reference to the past as possible. Reestablishing an automobile license, charge accounts, credit cards, a license to practice law, medicine, and so forth, are fraught with difficulties.

To many transsexuals and their attorneys in the past, the first line of attack appeared to be the change of the birth certificate so as to indicate the new sex identification. The change of the birth certificate seemed to be a quick solution to the problem of creating the new identity. In a few jurisdictions where the matter has been litigated the courts have held, in effect, that a birth certificate is just what it is, a birth certificate. That is to say, it is a certification of a set of facts that were held true at the time of the person's birth. This naturally includes the sex, and in the case of a male transsexual, there is no question that at the time of birth the infant was regarded as unequivocally a male. An amendment has been allowed, stating that at the present time, or from a certain date henceforth, said person is a female, and known by a new female name. Since the original birth certificate could not be destroyed or obliterated, the amended birth certificate would not serve the purpose of creating a new identity and it would be a constant reminder of the past.

Another equally disappointing device used by some transsexuals in the creation of a new identity is the obtaining of a court order changing the name of the transsexual. In point of fact, however, the law does not

require a person to receive the court's permission to change his name. One may call himself by any name that one may wish to use, providing said usage is not for purposes of fraud. Most famous actors and actresses who have used assumed names for years have never bothered to change their name "legally," as the court-order procedure is often described. The real purpose in having one's name changed by means of a court procedure is for the very practical purpose of having a permanent record which identifies Tom Jones and William Smith as being one and the same person. Without such a legal procedure, whenever legal proof of a person's identity is required, it is necessary to have an affidavit of some person who knew Tom Jones when he was Tom Jones and knows him now when he is William Smith and can therefore attest that Tom Jones and William Smith are in fact one and the same person. Where a court procedure has been used, a certified copy of the court decree has served as legal proof of identification, and since certified copies of said identification are available ad infinitum, one is not therefore dependent on someone surviving who knew one then and now.

Useful as such a court decree may be to the average individual, this same decree can bring disastrous results for the transsexual. This same court decree which certifies that Tom Jones and Mary Smith are one and the same person becomes ludicrous indeed. Therefore this procedure, like the birth certificate procedure, fails to meet the transsexual's need to create a present identity without any reference to the past.

The plain truth of the matter is that creating an identity is very difficult and requires careful planning. At the moment there is no standard method. Each case is unique and a method must be devised in response to this uniqueness. To illustrate this procedure, a typical situation will be described and the steps used will be outlined.

Let's say that Mr. Jones has a degree in engineering. Mr. Jones has now become Miss Smith, who has relinquished her former position and now seeks employment in a different part of the country. The prospective employer wishes to see the proof of the fact that Miss Smith is an engineer and since the job involves research, also wishes to see a transcript of Miss Smith's academic record in the field of engineering. Contact is made by Miss Smith's attorney with the Dean of the school from which Miss Smith, as Mr. Jones, obtained an engineering degree. Full disclosure is made and the Dean is sympathetic to the problem. A transcript is requested by Miss Smith's attorney, said transcript to be in the name of Miss Smith rather than Mr. Jones.

Though sympathetic, the Dean is still most anxious to protect the integrity of the University and raises the question as to the University's duty concerning the former identity of Miss Smith and informing the prospective employer of this information. Miss Smith's attorney states that if the transcript contains the information of Miss Smith's former sex and identity, Miss Smith will not be employed by the prospective

employer. The attorney further states that if the University were being asked to recommend Miss Smith or to vouch for her ability as an engineer and her emotional stability in addition, the question of the University's obligation to so inform the prospective employer would be most pertinent. But the University is only being asked for the scholastic accomplishments of Miss Smith in the form of furnishing the grades achieved and the degree awarded. Since the grades *were* earned by a person formerly known as Mr. Jones and now known as Miss Smith, and since as a result of earning the said grade a degree of engineering was awarded to this person, there would be absolutely no element of fraud on the part of the University.

The lawyers for the University admit that Miss Smith's attorney, in essence, is correct, but further advise the Dean to obtain three affidavits from Miss Smith's attorney. It is agreed that the three affidavits will be received in confidence and retained in the files of the University, and under no circumstances will be disclosed without the permission of Miss Smith.

The first affidavit written and attested to by Miss Smith's attorney is the usual type of affidavit which simply states that Mr. Tom Jones who received his degree in engineering from such and such an institution, is the same person as Miss Smith who is presently applying for a transcript and a certification of that degree.

The second affidavit is executed by the physician of Miss Smith who either performed the sex-reassignment operation or supervised the entire medical procedure from the beginning to the end. Here follows an illustration of such an affidavit:

COUNTY OF:
STATE OF: } SS.:

_____ M.D., being duly sworn, deposes and says:

1. THAT TOM JONES AND MARY SMITH, of _____(address)_____, are one and the same person.

2. THAT I have known TOM JONES personally since _____(date)_____.

3. THAT he belongs to the rather rare group of transsexuals, occasionally referred to in the medical literature as psychic hermaphrodites. Male transsexuals are psychologically female, although anatomically male. They suffer from a gender-role disorientation that is inaccessible to psychotherapy. To live as a woman and to become a woman as nearly as medical science can accomplish it, is their principal aim in life.

4. THAT TOM JONES underwent several years of hormonal feminization and on _____(date)_____ a sex-reassignment operation was performed at _____(place)_____.

5. That examinations afterwards revealed that Tom Jones, now Mary Smith, is no longer able to function as a male, either procreatively or sexually. The surgical alteration, however, now enables Mary Smith to have marital sex relations as a woman. Therefore, Mary Smith must be considered to be of the female gender. Any "male" designation or male attire would no longer be consistent with the established facts.

The institution for whom the foregoing example was drafted requested a reasonably accurate description of the medical and surgical procedures. The Legal Department of the institution felt that such an affidavit would substantiate the cooperation on the part of the institution, and thus protect the institution from any major claims of fraud and/or frivolity.

The third affidavit requested by the institution is perhaps the most interesting one of the group. It is executed by the transsexual herself, and contains a short biographical summary of the transsexual's life, especially noting the various feelings and steps arrived at in the sex transition. It will be noted that, included in the affidavit, there is a statement to the effect that the transsexual is serious of purpose and intends to live out the rest of her life as a female. The statement of sincerity of purpose as executed by the transsexual affords the university further protection by establishing that it has aided one of its graduate students with understanding and sympathy. Here follows an example of this type of affidavit:

STATE OF:
COUNTY OF: } SS.:

MARY SMITH, being duly sworn, deposes and says:

1. THAT I am ___(age)___ years of age, having been born on the ___(date)___.
2. THAT I have received my B.S. degree from _____ Institute, M.S. degree from _____ University, and a degree of Ph.D. from _____ University.
3. THAT after many years of discontent and frustration living as a male, I entered upon a series of consultations with physicians, psychiatrists and psychologists who were specialists in the field of gender-role disorientation.
4. THAT after many years of said consultations I made the decision to live as a female for the remainder of my life.
5. THAT to effect this change I resigned from my _____ position at _____ University so as not to cause immediate embarrassment at the time of change, and further sought legal advice from _____ _____, an attorney.
6. THAT since ___(date)___ I have dressed and lived as a female and fully intend to do so for the remainder of my life.
7. THAT I feel that I am proficient in the profession for which I was trained, specifically, the _____
8. THAT I am most anxious to resume my work so that I can better carry out my responsibilities as well as being better able to support myself.

_____

Signed: MARY SMITH

The obtaining of this transcript with the new name attached thereto is far more useful than merely aiding the transsexual to obtain employment in her chosen profession. It represents the first of many steps in creating the new identity for the transsexual. It represents a link with the past without mentioning the transsexual's former status.

Further, it represents an actual proof of identity. In addition, it serves to persuade other institutions or government departments to aid the transsexual similarly. For example, the transsexual wishes to obtain a new driver's license. This should not be done in the usual manner by standing in line at a window at the Motor Vehicle Department Building. An appointment is requested of the Commissioner or his immediate assistant and the problem presented by the transsexual's attorney using the fact that a respected institution of learning was willing, for humane and legitimate reasons, to help the transsexual. If requested, the Commissioner can be furnished with approximately the same three affidavits, thus protecting the Government agency in its cooperation.

Gradually, by using one step to build the next step, the transsexual's identity as described by various documents of daily life, such as credit cards, licenses, etc., becomes solidified, and the transsexual need not be apprehensive to meet the future.

There is no question about the fact that, in the cases described above, the past identity of the transsexual is revealed in the circumstances described. However, the past is revealed under the controlled circumstances of a conference with top officials or executives and responsible evidence furnished by the members of the appropriate legal, medical, and academic professions. Under such circumstances, the authorities are more likely to be understanding, and if protection of a reasonable nature is afforded to them, their cooperation is usually forthcoming. The results of revealing the medical and surgical sex reassignment under these controlled circumstances are very different than the revealing of such a sex change as it would appear on a document such as a transcript which stated that Tom Jones, now Mary Smith, had received such and such a degree, with no further explanation supplied.

At this point, the question might well be raised: "Doesn't the transsexual have legal rights, and couldn't a great deal of what has been described above be accomplished by court orders?" Theoretically speaking, the answer is "yes." However, in matters pertaining directly or indirectly to sex, a court has often given the answer of "no," because of public and emotional pressures, even when, legally speaking, the answer clearly could have been "yes." If more precedents such as described above are accumulated in the present records, the court's future answers are much more likely to be "yes." The unique practice which eventually becomes common practice has a better chance to be recognized by a court of law.

Providing for the Future

The transsexual must learn that he cannot rely on the ordinary legal rights available to others even though he may be theoretically entitled to them, and must learn to use preventive measures wherever possible. It would be impossible at this writing to spell out every possible mishap

that may occur. In the first place, there is little precedence available upon which to base advice. One can only point to the more obvious areas and, by the means of "educated guesses," suggest where caution would help to avoid the more obvious dangers.

The making of a will by a transsexual, for example, presents certain difficulties in the ordinary course of events. Sex reassignment often leaves in its wake bitterness and hostility on the part of the transsexual's immediate family. Parents, children, and spouses alike are at a loss, in many cases, to understand the full scope of the transsexual's problems.

In most jurisdictions, a will can be upset if it can be proved that the person writing the will was either being unduly influenced and pressured by someone, or of unsound mind and therefore lacking in testamentary capacity. Superficially, it would seem not too difficult at least to allege that the transsexual, by virtue of the sex change, must have been of unsound mind. Parents, for example, who, because of shame and embarrassment, disown a son who has become a daughter, might vent their frustrations by deliberately attempting to contest their offspring's will, especially if the persons named in the will are other transsexuals or simply non-relatives. It can easily be imagined that both above-mentioned arguments might be used, that is, the parents might claim that these "so-called friends" had used pressure in influencing the transsexual to make the bequest to them, and that the sex reassignment would never have been pursued by the transsexual if not for these "friends' influence." In addition, the second element would then be the allegation that the very desire to change one's sex would be by itself indicative of a lack of stability and testamentary capacity. The newness of the entire subject of transsexualism limits the usefulness of a psychiatrist as an expert witness, because he might not have available adequate scientific information.

It should be noted that the law regarding testamentary capacity is a very broad one in that the court recognizes moments of lucidity even in an insane person, who can be therefore capable of understanding during such moments the nature of writing a will and disposing of his earthly properties. Therefore, a carefully drawn will, containing certain pertinent provisions, can reasonably safeguard against possible contest as described.

Here again, as in other legal areas, is the problem of preserving one's privacy while at the same time divulging sufficient information for a specific purpose, in this case, the writing of a will. It should be remembered that in most jurisdictions a will submitted for probate after the person's death becomes a matter of public record, thus again promulgating notoriety. Although the testator is now deceased, the survivors still deserve all the protection they desire.

In a situation where the transsexual owns real estate and said piece of property is presently recorded in the office of the County Clerk under

the original name of the transsexual, the following procedure might be used. It would be legally very interesting to test the title to a property by having Tom Jones convey it to Mary Smith, both parties in the deal being one and the same person. But it would be unfair to ask the transsexual to suffer privacy invaded and quietude disturbed while the legality of title would be tested in various courts. Thus perhaps the easiest and simplest procedure would be for Tom Jones to execute a deed conveying the property to friend "X." Simultaneously, or a few days later, "X" would then execute a deed for recording, conveying the property to Mary Smith, the original owner under the new name. This procedure, commonly used in the practice of real-estate law, will not, therefore, attract undue attention.

CONCLUSION

It would be impossible to attempt to cover all legal contingencies facing the transsexual starting a new everyday life. The attempt has been made in this chapter to cover at least some of the major areas of legal endeavor immediately subsequent to medical and surgical sex reassignment.

This beginning period in the legal life of the transsexual is crucial. Almost no legal precedent is available, and inappropriate precedents should be avoided wherever possible while new and appropriate precedents are being created. In the meantime, the transsexual must also remember to avoid litigation wherever possible, even if it means to forfeit temporarily some legal rights that would be unquestionable if the person were not a transsexual. The transsexual's concern should not only be for the self but for other persons facing similar problems. An erroneous court decision, clumsily attained, will affect not only that particular case, but all those that will follow as it will establish a precedent. Emotional litigation should be avoided wherever possible because wherever the adversary might be tempted to refer to the past to win a case, the transsexual runs the risk of losing peace of mind even when winning the case. For example, let us say that the transsexual decides to sue for libel and slander, because of the defendant's allegation that the transsexual was dishonest in a business transaction. If suit is started immediately instead of attempts to correct what actually might have been a misunderstanding between the transsexual and the defendant, the defendant might feel pushed to allege that the transsexual plaintiff is basically dishonest in that she was once a "he" and the new life created was all done secretly and furtively, implying fraud, at least as it is so treated by the press. The defendant can utilize this to prove that he, at least, had the right to believe the transsexual's basic dishonesty even if facts now prove that the plaintiff was honest in the business transaction.

It would appear, at least to this author, that the day is coming when

many of the precautions outlined above will not be needed. But, though in the not-too-distant future, that day has not arrived as yet.

SUMMARY

Legally speaking, the transsexual must pass through several stages during the transition from male to female. The first stage can be described as the "incubating" period, during which a diagnosis of the disturbing problem may be as yet beyond the reach of the transsexual. The resulting confusion as to whether he is a heterosexual transvestite, homosexual, or transsexual may have legal consequences in the form of arrests for such varied violations as loitering, masquerading, sodomy, and disorderly conduct.

The second stage can be described as that period just prior to and just after the reassignment surgery, during which the transsexual must readjust her own identity, becoming accustomed to the social, vocational, and financial life of the female. It is during this period that the transsexual's former social life with its personal attachments must be concluded and the foundations created upon which a new life can be built. Legal problems concerning employment, marriage, parenthood, and the like must be solved.

The final stage concerns itself with the creation of a connection between the old past and the new future, so that some kind of continuity can be preserved. An academic degree the transsexual had earned as a male in the past must become acceptable for the female of the present and future, personal credit must be re-established and property ownership must be recorded while a maximum of privacy must be maintained for the emotional security of the transsexual. Establishing precedent must be considered at every step taken.

CHAPTER 29

TRANSSEXUALS AND THEIR "LEGAL SEX"

John P. Holloway, J.D.

This chapter is intended as an introduction to one of the legal problems which the transsexual patient faces—change of sex designation on his or her birth certificate. The legal change of name is another problem, but is not to be discussed here except to note that, in the absence of statutory restrictions, a person may lawfully change his name without resorting to legal proceedings as long as the change does not interfere with the rights of others or is not done for fraudulent purpose.[1]

Assuming that a person has undergone a sex-conversion operation to complete his or her gender-role change, what is this person's legal sex status?

To answer this, one must first ascertain how such person's sex was legally determined in the first instance, and where it is recorded or reported. The answer to the first question is that there never was, nor is there now, any formal legal determination of sex at birth. The decision as to the sex of a baby at birth is arbitrarily made by the attending physician or midwife, and is based upon a superficial examination of the external genitalia of the baby. In Colorado, as in many other states, the law provides:

66–8–12. *Certificate of birth to be filed.*—It shall be the duty of the attending physician or midwife to file a certificate of birth, giving all the particu-

[1] 65 C.J.S., Names, § 11(1); *Krueter* v. *U.S.*, 201 F.2d 33(1952); *Don* v. *Don*, 142 Conn. 309, 114 A.2d 203(1955); *Application of Smulevitz*, 101 C.A.2d 70, 224 P.2d 911(1950); *Tureskey* v. *Superior Court*, 97 C.A.2d 830, 218 P.2d 784 (TR 1950). It should be noted, however, that a judicial change-of-name proceeding may be required if one needs same as a matter of record for all sorts of property rights and will probably be required in most states for birth certificate purposes, especially where the last name or surname is to be changed.

lars required by this article, with the local registrar of the district in which the birth occurred, within three days after the date of birth. If there be no attending physician or midwife, then it shall be the duty of the father or mother of the child, householder, or owner of the premises, manager or superintendent of public or private institution, in which the birth occurred, to notify the local registrar, within three days after the birth, of the fact of such a birth having occurred. It shall then, in such case, be the duty of the local registrar to secure the necessary information and signature to make a proper certificate of birth.[2]

A "proper certificate of birth" includes, among other required data, the sex of the child.[3] The courts have repeatedly held that the physician, midwife, or other person in attendance can be compelled to furnish all the particulars required for the certificate of birth.[4] Having been made, this highly sophisticated determination of sex has the effect of a legal conclusion. What legal procedures or remedies are available to change this conclusion of law if it is found to be in error or if it requires amendment or change at some later time? Do the state laws make any provision for, or have the courts established any procedures to accomplish, a change in gender on birth certificates?

Statutory Considerations

With one exception, an examination of the statutes reveals nothing of a specific application. This statutory exception is found in the laws of the State of Illinois, wherein the legislature has authorized the State Registrar of Vital Statistics to establish a new certificate of birth when he receives:

> An affadavit by a physician that he has performed an operation on a person, and that by reason of the operation the sex designation on such person's birth record should be changed. The State Registrar of Vital Statistics may make an investigation or require any further information he deems necessary.[5]

The vital statistics or public records laws of the remaining forty-nine states were examined as to the existence of specific provisions for procedures to correct, change, alter, or amend facts contained in birth certificates. Although virtually all states had statutes providing for amendment where the birth is subsequently legitimized, or a name is changed, or adoption occurs, a few states appear to have no specific statutory provision dealing with general corrections, changes, alterations, or amendments.[6] This is not to suggest that a change, such as sex designation, could not be obtained in these states, as this might be accom-

[2] Colo. Rev. Stat. Ann. § 66-8-12 (1963).
[3] Colo. Rev. Stat. Ann § 66-8-13(1)(d) (1963).
[4] 25 Am. Jur., *Health*, § 47.
[5] Ill. Stat. Ann. Ch. 111½, § 73-17(d) (Smith-Hurd, Supp. 1967).
[6] Kentucky, South Dakota, Texas, Washington, West Virginia.

plished readily under other broad discretionary powers vested in appropriate officials by implication or by general rather than specific empowering sections of their respective laws. The complete vital statistics laws of each of the states were not examined, however, the conclusions herein discussed being drawn from statutory indices.

The remaining states have sections within their vital statistics laws which appear to be broad enough to allow corrections, amendments, alterations, additions, or a combination of remedies.[7] Surprisingly, these vary so from state to state that no real definitive similarities can be detected other than the pure "correction" statutes, such as found in North Dakota, to wit:

> 23–02–20. *Correction of errors in birth records.*—The state registrar of vital statistics may *correct* any error in birth records, and to that end, may receive and file amended birth certificates or affidavits and other proof showing that former records are *incorrect.*[8]

and the general "alteration" statutes, such as found in Tennessee, to wit:

> 53–419. Alteration of certificate—Regulations governing.—The acceptance of evidence and requests for alteration of any certificate recorded and on file with the state registrar shall be subject to regulations in which the department shall prescribe in detail the proofs to be required and submitted before any application for alteration is authorized and made.[9]

Obviously, states which have statutes limiting changes to "corrections" only pose the greatest difficulty of proof for the transsexual, as the burden is then placed on him (or her) to prove that the original registration was erroneous. Although expert medical testimony might be available to establish that the original registration was incorrect or "in error" in the case of a surgically converted transsexual, to obtain proof thereof under present generally understood medical criteria for determining sex, would appear to be difficult. Colorado, until recently, was classified as a "correction" state, but as of January 1, 1968, a statutory amendment places Colorado in the "alteration" category. The statute now provides:

> 66–8–15. *Alteration of reports and certificates; amended reports and certificates.*—(1) No vital statistics report or certificate shall ever be altered in any way except in accordance with this article and applicable regulations. The date of alteration and a summary description of the evidence submitted in support of the alteration shall be endorsed on or made a part of each

[7] Alabama, Arkansas, California, Florida, Hawaii, Alaska, Arizona, Indiana, Georgia, Oregon, South Carolina, Iowa, Kansas, Idaho, Missouri, Montana, Nevada, New Mexico, Ohio, Utah, Wisconsin, Wyoming, New York, Maine, Oklahoma, Delaware, Maryland, Massachusetts, Minnesota, Nebraska, North Carolina, New Hampshire, North Dakota, New Jersey, Pennsylvania, Rhode Island, Tennessee, Vermont, Virginia, Connecticut, Louisiana. Michigan not available for evaluation.

[8] N.D. Cent. Code § 23-02-20 (1960) [emphasis added].

[9] Tenn. Code Ann. § 53-419 (1966).

vital statistics certificate that is altered. Every vital statistics report or certificate that is altered in any way shall be marked 'Amended' excepting the birth report or certificate that is altered by the addition of a father's name pursuant to section 66–8–12 (3), in which case, upon request of the parents, the surname of the child shall be changed on the report and certificate to that of the father, and also excepting additions and minor corrections made within one year after the date of the statistical event as may be specified by applicable regulations.[10]

The "alteration" statute allows for greater discretion than the "correction" statute, and shifts the forum from the judiciary to the newly created office of the State Registrar of Vital Statistics. The Attorney General of Colorado has so concluded by ruling:

"It is my opinion that under this new law, after January 1, 1968, such change in designation of sex may be made pursuant to and in accordance with the above cited section and such applicable regulations as may hereafter be adopted by the Office of State Registrar.[11]

Judicial Considerations

To what extent have the courts been called upon to afford relief and order a change, amendment, alteration, or addition to birth records? With one exception, to be separately treated hereinafter,[12] the writer has been unable to find a single reported case, trial, or appellate, wherein a court was called upon to direct a change-of-sex designation on a birth certificate. Cases may be found stating general principles to the effect that Courts of Equity have inherent jurisdiction to grant relief in cases of fraud by ordering the cancellation of written instruments, even though they are public records, where private rights are invaded.[13] This principle is most clearly enunciated in an early opinion of the Court of Errors and Appeals of New Jersey entitled *Vanderbilt* v. *Mitchell*[14] which involved a successful attempt to remove the plaintiff's name from a birth certificate, on the grounds that he was not the father of the child and, in fact, had had no access to the mother thereof. After reviewing early United States Supreme Court cases and early English equity or chancery cases, the court made the following observation:

If the court has jurisdiction to set aside adjudications of judicial officers on the grounds of fraud, it necessarily follows that a public record, *the essential facts of which are obtained by ex parte statements, without the sanction of an oath* and prepared by an officer whether performing a ministerial or judicial function, may be annulled, and rendered innocuous by a decree of a

[10] Colo. Laws 1967, ch. 445, § 66-8-15 at 1061.
[11] Opinion 67–4135, Attorney General of Colorado, to Frank H. Conry, Clerk of the District Court, City and County of Denver (1967).
[12] *Anonymous* v. *Weiner*, 50 Misc.2d 380, 270 N.Y.S.2d 319 (Sup. ct. 1966).
[13] *State ex rel. Herzog* v. *Koelling*, 229 S.W.2d 252 (Mo. Ct. App. 1950), which involves the expunging of a marriage certificate which contained the forged signature of the officiating minister.
[14] 72 N.J. Eq. 910, 67A.97 (1907).

Court of Chancery, especially where private rights are invaded and where the forms of law are used to perpetrate a fraud, establish an unfounded claim *or imperiously affect* or threaten future vested or contingent estates.[15]

When it was suggested by the defendant that plaintiff had not shown any specific invasion of a present or vested property right, the court was quick to note:

If it appeared in this case that only the complainant's status and personal rights were thus threatened or thus invaded by the action of the defendant and by the filing of the false certificate, we should hold, and without hesitation, that an individual has rights, other than property rights, which he can enforce in a court of equity and which a court of equity will enforce against invasion.[16]

Cases may likewise be found wherein the courts took jurisdiction to consider conclusions as to cause of death on death certificates;[17] to consider change in date of birth;[18] and a number of cases from the South involving designation of a person's "color."[19]

The "color" cases are interesting in that they illustrate the extreme to which the judiciary will go to correct this particular type of "error" on a birth certificate. The following statement of the Supreme Court of Louisiana in a leading case emphasizes this extreme:

Relator must show that he has a clear legal right to have the correction made. The legal certainty of the proof submitted must be such as to compel the registrar of vital statistics to perform the ministerial duty of changing the recordation from 'colored' to 'white.' . . . As the name indicates, the records kept by the registrar are vital to the general public welfare. The registration of a birthright must be given as much sanctity in the law as the registration of a property right.[20]

The reader will note that the court refers to the registrar's duties as "ministerial," thus authorizing mandamus, a legal rather than equitable remedy. It might be argued that in Louisiana the registrar's duties concerning contents of the birth certificate are specific and thus ministerial.[21] The Louisiana statute, however, in conferring the power to alter birth certificates, would seem to vest more than mere "ministerial" duties in the registrar. It provides:

§ 266. *Alteration of certificates after registration.* No certificate or record on file in the local registrar's office shall be altered except upon submission

[15] 67 A. at 99 [emphasis mine].
[16] *Ibid.*, p. 100.
[17] *Talbot* v. *Wooster*, 61 N.J. Super 221, 160 A.2d 313(1960); *Mitchell* v. *Helpern*, 14 N.Y.2d 817, 200 N.E.2d 454 (1964).
[18] *Scallen* v. *Heustis*, 376 Mich. 64, 135 N.W.2d 426 (1965).
[19] *State ex rel. Cousin* v. *La. State Bd. of Health*, 138 So. 2d 829 (La. Ct. App. 1962); *State ex rel. Lytell* v. *La. State Bd. of Health*, 153 So.2d 498 (La. Ct. App. 1963).
[20] *State ex rel. Treadway* v. *La. State Bd. of Health*, 221 La. 1048, 1060, 61 So. 2d 735, 739 (1952).
[21] Wests La. Stats. Anno., Rev. Stats. 40:244.

of sufficient documentary or sworn evidence acceptable as a basis of the alteration.[22]

Thus in Louisiana, where race is the issue, the parties have litigated, even to an appellate level, the manner in which records should be altered, once the right to alteration is established.[23]

The only existing judicial precedent dealing with the amendment of a birth certificate for a transsexual is the heretofore mentioned 1966 opinion of the Supreme Court of New York entitled *Anonymous* v. *Weiner*.[24] It should be noted at the outset that this is not an appellate decision, the Supreme Court in the State of New York being a court of general trial jurisdiction. The opinion, therefore, lacks the precedent of an appellate decision.

In the Weiner case the petitioner, a surgically converted male-to-female transsexual, applied to the New York City Department of Health's Bureau of Records and Statistics for a change in the sex designation on "her" birth certificate and for amendment thereof from "male" to "female" and issuance of a new certificate so indicating.

The opinion indicates that the pertinent provision in the municipal health code allowed amendment of a birth certificate only if "the Commissioner or his designee is satisfied that the evidence submitted shows the true facts and that an error was made at the time of preparing and filing of the certificate. . . ." Clearly then, this is a "correction" type of law—here a city ordinance, rather than a state statute. The Board of Health, which had admittedly granted previous amendment requests by other transsexuals, elected to seek the advice of the New York Academy of Medicine. This body, in turn, assembled a panel of experts which included gynecologists, endocrinologists, cytogeneticists, psychiatrists, and a *lawyer*. In a report which was published later, the committee concluded that:

1) Male-to-female transsexuals are still chromosomally males while ostensibly females.

2) It is questionable whether laws and records such as the birth certificate should be changed and thereby used as a means to help psychologically ill persons in their social adaptation. The Committee is therefore opposed to a change of sex on birth certificates in transsexualism.[25]

Having thus exhausted "her" administrative remedies the plaintiff, known as "anonymous," sought judicial relief under Article 78 of the New York Civil Practice Law and Rules in the nature of mandamus, to compel this change and issuance of a new birth certificate. An examination of the Civil Practice Law and Rules of New York indicates that

[22] Wests La. Stats. Anno., Rev. Stats. 40:266.
[23] *Toledona* v. *Drake*, 161 So.2d 339 (La. Ct. App. 1964).
[24] See footnote 12. Also, see Introduction, footnote 1.
[25] Report by the Committee on Public Health, *Change of Sex on Birth Certificates for Transsexuals*, The New York Academy of Medicine (1966).

this is a special type of proceeding,[26] limited in scope and pleadings, wherein the Court is expressly confined in a case of this nature to a single question, to wit, was the determination by the Board of Health ". . . affected by an error of law or was [it] arbitrary and capricious or an abuse of discretion."[27]

As might be legally expected, the trial court denied the relief requested and noted:

> The test of arbitrariness does not permit the Court to substitute its views for those of the administrative body charged by law with the authority and responsibility of maintaining the records of births and deaths. In its role as ultimate arbiter of the legality of administrative action the judiciary may not arrogate to itself the power of a super-Board of Health to weigh the wisdom of respondent's acts. (Paraphrasing *Day-Brite Lighting, Inc.* v. *State of Missouri*, 342 U.S. 421, 423, 72 S.Ct. 405, 96 L.Ed. 469).
>
> Indeed, the nature of the problem posed initially to the Board of Health and now to the Court requires a specialized training and skill for which the Board is uniquely equipped. Judicial deference to the decision of those members of the Board of Health who are physicians or otherwise uniquely qualified appears mandatory in the singular circumstances here involved.[28]

The trial court concluded that, "within the context of the present record," judicial intervention would constitute a violation of the separation of powers of government.

This case has already been criticized by legal writers, not so much as to the legal conclusions under the facts, but as to the social justification of the rationale supplied to the Court by the medical experts.[29]

The writer agrees with this criticism and, in addition, takes issue with one or two of the specific findings in the committee's report. For example, the writer questions the accuracy of the following legal conclusion: "Thus the change of sex of a person named in a birth certificate would have no evidentiary or probative value in court."[30]

Typical of states having either the so-called "model" state vital statistics act—1959 revision proposed by the United States Department of Health, Education and Welfare (Public Health Service), or the states possessing the so-called Uniform Vital Statistics Act promulgated by the Commission on Uniform State Laws[31] is language from Colorado's new law, to be effective January 1, 1968:

> 66–8–17. *Certified copies furnished—fee.* . . . Any copy of the record of a birth or death, where properly certified by the department of public health

[26] New York CPLR, § 7804 (Bk. 7B).
[27] N.Y. Civ. Prac. § 7803 (3) (McKinney 1963).
[28] *Anonymous* v. *Weiner*, 50 Misc. 2d380, 384, 270 N.Y.S.2d 319, 323 (Sup. Ct. 1966).
[29] 18 Syracuse Law Review 383, 394 (1966).
[30] See footnote 25, *supra.*
[31] An examination of state laws reflects many similarities between these acts, but virtually all states modify one or more provisions to suit local conditions and frequently change the language itself.

to be a true copy thereof, shall be prima facie evidence in all courts and places of the facts therein states. . . .[32]

Therefore, the facts stated in a birth certificate, such as his or her sex designation, clearly do have evidentiary or probative value.[33] However, as the primary intent of the transsexual is to use the certificate for other legitimate purposes such as to obtain marriage licenses, passports, social security coverage, insurance or employment, which are vital to his or her new gender role, especially where age must be verified, the question of evidentiary or probative value in court seems somewhat irrelevant.

Other statements and conclusions of the commission's report[34] that should not go unchallenged are the following:

> Federal agencies have indicated their preference for a court order to precede the change of sex on a birth certificate with the records showing a change. Thus a continuity of a person's record would be ensured and the court action prove an invaluable mechanism to effect linkage between records created before and after the event.

and

> The Committee would point out that there are other ways to help these persons by: relief by court order to change name and sex, or amendment of the birth certificate by showing the new sex but still showing the original sex and the change of sex. The desire of concealment of a change of sex by the transsexual is outweighed by the public interest for protection against fraud.[34]

Is the committee suggesting that a court can "order a change of sex" but that an administrative body or officer cannot? If this is what they mean, and if they believe it can be done in a judicial change of name proceeding, I would suggest that neither the New York[35] nor Colorado statutes[36] are broad enough to include a change of sex, with the change of name. It certainly cannot be seriously suggested that a change of first or given name, such as "John" to "Mary," automatically serves to "change" the person's sex if her basic legal document still records her as "male."

Furthermore, if there is a judicial definition which recognizes medical or other criteria for determining sex or, more accurately, definitions of "male" and "female" or "man" and "woman," the writer has been unable to find it. The courts have spoken generally and used the terms

[32] See footnote 10, *supra.*
[33] See *People of the State of Ill. ex rel. Miceli* v. *Rembros,* 26 Ill. App. 2d 429, 168 N.E.2d 562 (1962), holding the facts stated in birth certificates are prima facie evidence, but may be rebutted.
[34] See footnote 25, *supra.*
[35] See N.Y. Civ. Rights § 60–64 (McKinney Supp. 1967).
[36] See Colo. Rev. Stat. Ann. § 20-1-1 (Supp. 1965); and Colo. Laws 1967, Ch. 445, §66-8-15(2), at 1062.

"woman" and "female" interchangeably in the rape and bastardy cases,[37] and have held that a "man" is an adult male of the human race, as distinguished from a boy or a woman.[38] The term "man," however, when commonly used in its generic sense, in all matters of statutory construction, also includes women.[39]

The *Weiner* case is unfortunate but is does not, in the opinion of the writer, constitute the type of judicial precedent that should cause other courts or administrative officers to deny applications for change in sex designation on birth certificates. It is based on a medical report that appears to assume that the application for change was made to conceal some sort of potential fraud against the public. An enlightened and candid presentation of the facts would dispel this fear.

CONCLUSION

It seems to the writer, all legal and medical niceties aside, that once a person undergoes sex-conversion surgery and fully assumes the gender role of the sex to which he or she has been converted, society has an obligation to furnish such person with the legal documentation needed for living in such role. To deny such a request is to punish the individual without serving any interest of society at large. The "integrity" of the records can be protected by requiring reasonable proof to justify amendment and by establishing reasonable rules and regulations for making such an amendment.

Until such time as medical science is prepared to prove that the sex designation at birth was incorrect, I would favor an amendment to the original certificate and endorse thereon, or attach thereto, whatever documentation of proof is required, but then, as with adoption and legitimization cases, seal the original and issue a certified copy incorporating the amended facts as though they were the original facts. The only reference to its amendment would then be in the certification statement of the Registrar. This should satisfy the objections apparently raised by the medical committee that advised the Court in the *Weiner* case and still treat the transsexual fairly.

The "legal sex" of transsexuals should be the sex of their adopted gender role to which they are converted. This is the life they will live in society and by these standards their "legal sex" should be determined and given recognition by administrative officials or, if necessary, by the legislatures or courts.

SUMMARY

The basic legal record of a person's sex is his or her birth certificate. As this document is also preferred for establishing proof of age, its cor-

[37] *Thomas* v. *Narvis*, 47 Hawaii 605, 393 P.2d 645 (1964).
[38] *Valdez* v. *State*, 156 Tex. Crim. 192, 240 S.W.2d 320 (1957).
[39] Colo. Rev. Stat. Ann. § 135-1-2(2) (1963).

rection or amendment to reflect the new gender role of a surgically converted transsexual is desirable.

With the exception of the State of Illinois, no state has any specific statutory provision which would authorize a change of sex designation on birth certificates. Most states, however, appear to have statutes which are sufficiently flexible to allow such changes. A different attitude, on a state-by-state basis, could develop, however, if those states permitting only "corrections" to birth certificates were to take a literal interpretation which, in effect, would require the surgically converted transsexual to prove that his original sex designation at birth was "in error."

Judicial relief for a surgically converted transsexual who sought reissuance of a birth certificate was denied in the only reported trial-court decision found. Other judicial authorities discussed herein indicate, however, that precedent exists for equitable relief, which would justify such a change on a birth certificate. Requests for change of the birth certificate should first be directed to appropriate administrative officers through the transsexual's physician, who can protect his patient's privacy. Litigation for change of name, in the absence of some very broad statutory language, does not provide for change of sex designation.

CHAPTER 30

LEGAL ISSUES OF TRANSSEXUALISM IN ENGLAND

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In this chapter, the term transsexualism is understood to involve an operation described as cosmetic and plastic genital surgery resulting in castration in the male, and, additionally, mastectomy in the female. For legal purposes, transsexualism must be distinguished from transvestism defined as the impulse to wear the clothing of the opposite sex. Dressing up may be a matter of arousing suspicion, but no more; it may give rise to opportunities for some criminal offense. Transsexualism is a much more serious consideration, since it may involve question of assault and battery. How the law in England deals with this and other associated conditions is the subject of this chapter.

TRANSVESTISM

Transvestism (or eonism) is a term used for those who derive pleasure from dressing in clothes of the opposite sex. It applies equally to men or women, though in practice it is generally understood to connote the condition of men adopting female dress. Psychiatrically, transvestism has been stated to have features of homosexuality, fetishism, and exhibitionism (Randell, 1959; East, 1949). Transvestism is not synonymous with hermaphroditism. The latter is regarded as constituting a special biological and clinical category of intersex in which vestigial or deformed genital organs can be identified but the biological determinants of sex are confused (Taylor and McLachlan, 1962).

Transvestism is not itself a criminal offense. It is the resultant effects of such behavior that may occasion conflict with the law. Cross-dressing by males presents some problems for the lawyer. The fact that females so acting do not come before the courts does not imply that the condition is unknown in that sex. In our society it may be easier for women to dress and work as men and thus enjoy a partial identification. There is some evidence that men find it easier to make a complete

change. That such men may have brushes with the law is apparent from general observation and from studies. For example, eight out of ten male transvestites studied by Taylor and McLachlan had a record of offenses against the law. The need to use a public lavatory immediately presents a problem. If the section appropriate to his dress rather than his physique is selected, he may be charged with conduct likely to cause a breach of the peace, with being a rogue and a vagabond, or under some local by-law. The type of crimes with which a transvestite has been charged range from burglary, stealing, assault, being an idle and disorderly person found in female attire at a hotel for an unlawful purpose (Vagrancy Act, 1824, s.4), and loitering with intent, down to an offense under the Servants Characters Act, 1792. In the latter case, an ex-officer, dressed as a woman, offered himself under false pretenses as a female servant (*Justice of the Peace*, 1937).

Burglary and stealing usually involve the obtaining of women's clothing and jewelry. No doubt many of these offenders would be regarded as fetishists and the law on this aspect is referred to below. Where active homosexuality is not involved, the assault cases arise as the result of the male transvestite being revealed to his male escort as belonging to other than his sartorial sex. This type of person has, apparently, singularly little interest in physical sex and indeed may be disgusted by it: "The feminine manner of the transvestite is not a design to stimulate sexual desire in the male, except as it is incidental to the impression that 'here is really a woman'" (Reinhardt, 1957). Active homosexuality combined with cross-dressing is to be discussed later.

The less precise offenses, such as loitering with intent to commit an arrestable offense (Prevention of Crimes Act, 1871, s.15 as amended by Criminal Law Act, 1967) or being an idle or disorderly person being found on enclosed premises for an unlawful purpose (Vagrancy Act, 1824, s.4), involve suspicious conduct. Cross-dressing might certainly place the accused in an awkward situation, the wearing of female attire providing possible evidence of an unlawful intention. Thus a male saxophonist was charged with "being an idle and disorderly person found in female attire at a hotel for an unlawful purpose," presumably under the Vagrancy Act, 1824, s.4. In this event, it was discovered that the musician had dressed up as a woman so as to get employment in a ladies' orchestra in the hotel. It is suggested, however, that if he had succeeded in being paid for playing he could have been convicted of obtaining money by false pretenses (*Justice of the Peace*, 1937). This suggestion follows from the intent to defraud by dressing up, for example where a person goes into a shop in Oxford wearing a cap and gown, thereby impliedly asserting that he is a member of the University, and thus obtaining credit (*R.* v. *Barnard*, 1837, 7 *Carrington and Payne* 784). The saxophonist's case might raise some curious arguments on the intent to defraud. For example, was he paid as a musician, or

essentially as a "lady," or as a lady-musician? Of course, the employer must be ignorant of the deception. It has, at least, been clearly established that the offense of being found on enclosed premises for an unlawful purpose (Vagrancy Act, 1824) must involve evidence of an intention to commit some act punishable by law and not merely an act of immorality not so punishable. This was the case (*Hayes* v. *Stevenson* (1860) 25, *Justice of the Peace* 39) in which a man and a woman were charged because they had resorted to the driveway of a private house for the purpose of having intercourse; it was held that it was not enough that there was an immoral purpose as there must be an intent to commit an act contrary to the criminal law of the land to substantiate the charges.

Obviously, cross-dressing may be adopted to facilitate a sexual offense, such as a criminal assault on children. When this relates to boys, the problem of homosexuality is involved. As regards girls, it is a sexual interference with an immature girl, which could be an assault, an indecent assault, or an offense under Indecency with Children Act, 1960, s.l., if the child is under fourteen years of age. These offenses are to be discussed more fully in relation to homosexuality between males.

As far as transvestism is concerned it is in itself no offense known to the law in England whether the cross-dressing relates to males or females unless there is intent to defraud or blackmail. This, in fact, accords with the psychiatric approach, namely that the identification with the opposite sex by cross-dressing serves a therapeutic purpose in some cases by, for example, allaying anxieties as to identity (Taylor and McLachlan, 1962; *Justice of the Peace*, 1937). Indeed, Taylor and McLachlan mention a man of forty-two in whom they observed that an indication of total integration with his much better adjusted wife was that, whenever cross-dressing, he invariably carried with him her spare false teeth. Naturally, such disturbing behavior may give rise to divorce proceedings. The grounds for the petition would be cruelty, though such conduct would generally be sufficient to provide good cause for leaving the transvestite spouse. In the case of *Bohnel* v. *Bohnel* (1960) (*Weekly Law Report* 590), the Court of Appeal affirmed the refusal of a decree of divorce for cruelty on the grounds of the husband dressing as a woman.[1] The court held that the husband did not intend to injure his wife by cross-dressing. The case might be decided otherwise today, after the decision of the House of Lords in *Gollins* v. *Gollins* (1964) (*Appeal Court* 644), which removed the requirement of the intent element in cruelty cases. As Reinhardt (1957) observes: "Transvestitists do get married; ordinarily the marriages are not satisfactory. They appear to be durable only in those instances where the wife accepts the husband with

[1] In *Williams* v. *Williams*, (*The Times*, 15.3.1958), however, the petition was granted by a court of first instance.

his transvestite inclination and fantasies." There is certainly evidence that many male transvestites have married and have fathered children (Taylor and McLachlan, 1962).

Apart from those persons who cross-dress for the purpose of facilitating some criminal offense, three different types of transvestites are apparent (Karpman, 1954): (1) The transvestites proper who seem more in accord with their sartorial than with their physical sex; the wearing of the clothes may provide an end in itself, in that sexual gratification is obtained by wearing clothes of the opposite sex. (2) The homosexuals, who dress up to increase or vary their attraction to their own sex; this is discussed below, in relation to homosexuality between males and lesbianism. (3) The fetishists and the exhibitionists, for whom the clothes and the wearing of them provide the fetish object and aim for sexual satisfaction. The transvestite tendency has an obvious relationship with exhibitionism. These aspects are discussed in relation to the law as it affects fetishism and exhibitionism.

Homosexuality

Homosexual acts between males who have attained the age of twenty-one is not an offense, provided the homosexual act is in private and the parties consent. A homosexual act here includes buggery with another man, an act of gross indecency with another man, or being a party to the commission of such an act. The act is not treated as done in private if more than two persons take part or are present, or if in a lavatory to which the public have access (Sexual Offences Act, 1967, s.1). Male transvestites may therefore utilize with impunity cross-dressing to facilitate homosexual relations. Thus men may be tricked into homosexual conduct by men masquerading as women. Indeed, in 1964, one of the authors of *Taylor's Medical Jurisprudence* (Simpson, 1965) was consulted by a senior surgeon of the Royal Navy as a result of the emotional disturbance caused to members of ship crews when they went ashore with attractive looking girls, who in bed exposed themselves as males. In such cases transvestite acts are an adjunct to homosexual relationships and, provided they are within the 1967 Act, no offense is committed. Of course, a criminal offense, such as an assault may be committed as a result.

Homosexual acts, such as a man dressed as a woman soliciting men, would seem to be an offense within s.32 of the Sexual Offences Act, 1956, which refers to a man persistently soliciting in a public place for immoral purposes. Certainly, the mere fact of masquerading in a public place would give rise to suspicions.

Dressing up may facilitate a criminal assault, especially on children. This could amount to an indecent assault which is an aggravated assault and, as in the lesser offense of common assault, requires an attempt to apply force of any kind to another, whether direct or indirect, to-

gether with indecency. For indecency there must be an act done to another as distinct from an accepted invitation to do something to the person of the accused. Consent would be a defense to such a charge; but a boy under sixteen cannot give any such consent (Sexual Offences Act, 1956, s.15 (2)). Where there is no threatening gesture but merely an invitation, which is accepted voluntarily, there is no assault (*Fairclough* v. *Whipp*, 1951, 63, *Criminal Appeal Reports* 128). However, gross indecency with children under fourteen, or incitement to do such an act, would today be punished under Indecency with Children Act, 1960, s.1. Gross indecency would involve, usually, mutual masturbation, some form of intercrural contact, or oral-genital contact.

Although there appears to be no by-law aimed at cross-dressing as an offense in itself (East, 1949; *Justice of the Peace,* 1937), there are numerous by-laws with a small fine attached (usually up to £5) which might affect a transvestist. For example, acts of indecency between males, in such places as public urinals, are frequently dealt with under by-laws.

Lesbianism

In England, it is not any more a criminal offense for a woman to dress up as a male than for a man to cross-dress as a female. Of course, if it were done with the intention to defraud or to blackmail the result would be different. Lesbian activities between women who consent do not constitute a criminal offense. In any case, the wide wording of the Sexual Offences Act, 1967, s.1 (mentioned above in relation to homosexuality between males) would seem to relate to homosexual acts in private whether between men or women. Such conduct might of course amount to a common assault or to an indecent assault, as discussed in relation to homosexuality. Likewise, it might amount to gross indecency or incitement to such if the other partner is under fourteen (Indecency with Children Act, 1960, s.1). If lesbian activities are carried out in a public place to the annoyance of residents or passengers, they would probably fall within offenses created by one of the many by-laws which regulate conduct possibly offensive to the public sense of decency.

Fetishism

Fetishism is generally regarded as comprising cases in which erotic excitement is stimulated by a part of the body of the desired individual that is not appropriate for normal sexual purposes or by an inanimate object. The quantitative factor of the emphasis on an object is the hallmark of fetishism; for a slight degree of fetishism is quite normal. "From the relative amount of time that a transvestite wears clothing of the opposite sex and the degree to which he or she makes the identification complete, the transvestite can be differentiated from the fetishist" (Taylor and McLachlan, 1962).

Fetishism in itself is not a crime, but its by-products may be. For example, burglary, theft, stealing from and taking cars, and assault may be perpetrated in pursuit of the desired object, such as a shoe, women's underclothes, or jewelry. Where the cross-dressing impulse occurs as part of a basic obsessional personality, this compulsion may result in suffering instead of gratification. Suicide may be the result (Randell, 1959). Suicide and attempted suicide are, since 1961, no longer criminal offenses (Suicide Act, 1961).

Exhibitionism

Exhibitionism in its extreme form, namely the exposure of the genitals, is not apparently a problem for the transvestite. As Karpman (1954) says: "The transvestite exhibits his garb rather than his genitals." It is, however, an offense at common law to commit an act outraging public decency in public in such a way that more than one person sees, or is able to see, the act. By-laws likewise exist which might possibly apply to cross-dressing of an outrageous nature on the grounds of indecency in public. It might be thought that the Vagrancy Act, 1824, s.4 could be invoked: "... every person willfully, openly, lewdly and obscenely exposing his person with intent to insult any female ... shall be decreed a rogue and vagabond." However, it would seem that "exposing his person" would be strictly construed as "exposing his genitals" and cross-dressing by a male, even if it did insult a female, would not fall within the section; the opinion is expressed that even the exposure of the backside with intent to insult a female is not within the section (Radzinowicz, 1957).

TRANSSEXUALISM

In the case of the male transsexual, surgical treatment involves castration, plastic surgery for the creation of female characteristics in the external genitalia, and the formation of an artificial vagina (Randell, 1959). Mastectomy involves the removal of the breasts of a female. There is no reported legal case involving either of these operations in England, though the Court of Criminal Appeal has been asked to give its blessing to the performance of an operation in prison which might have had the effect of curing the accused and which he was prepared to undergo (*R.* v. *Cowburn*, 1959, *Criminal Law Review* 590, Court of Criminal Appeal). The court refused to accede to this request and observed that what took place in prison was not its concern. The accused in this case was apparently a psychopath with uncontrollable sexual impulses. The medical reports suggested that there were only two possible solutions in his case: hormone treatment or castration. He seemed to have been willing to undergo the latter. The need to obtain the court's approval arose from the uncertainty of the law on this point and the fears of the prison authorities that such an operation might be

unlawful or contrary to public policy. It has been suggested, following an observation by Lord Justice Denning in a divorce case involving sterilization, that "an ordinary surgical operation, which is done for the sake of a man's health, with his consent is, of course, perfectly lawful because there is just cause for it."

It would seem most doubtful whether, in England today, the facts of *R.* v. *Cowburn* could provide a just cause for the operation. Indeed, orchidectomy in any circumstances would seem unjustifiable in the eyes of the law in England, having regard to the present understanding of the subject. It is true that the forcible feeding of a suffragette prisoner can be justified on the grounds that it was necessary to preserve the health of the prisoner in custody and, *a fortiori*, to preserve her life (*Leigh* v. *Gladstone*, 1909, 26 *Times Law Reports* 139, King's Bench Division). Further, it would appear that, even if the measures taken were incidentally to shorten life, a doctor is entitled to do all that is proper and necessary to relieve pain and suffering (*R.* v. *Adams*, 1957, unreported). Castration has, however, been condemned by legal writers of the highest authority (3 *Coke's Institutes* 118; Blackstone, *Commentaries* vol. 4, 206); but the grounds for the condemnation may have been public policy (1 *Cokes Institutes* 127a and b), namely, depriving the king of a fighting man.

The legal question raised by orchidectomy and mastectomy involves a consideration of ordinary and experimental operations and even the administration of drugs. On the former subjects, the English law is remarkably unclear. As Lord Devlin has put it: "For the law does not treat medicine well. I do not mean that it has any prejudice against doctors, but it does nothing to help them with the special problems of their calling. Commerce has always been the pet of the English common law" (Devlin, 1962). Liability may be civil or criminal. The former is relatively straightforward: The action in tort would usually be for negligence or assault. A person, who holds himself out as ready to give medical advice or treatment, implies that he is possessed of skill and knowledge for the purpose. If a surgeon performs an operation without his patient's express or implied consent, he is guilty of a trespass. Consent is implied in the sense that a surgeon would be assumed "to do everything in his power to remove the mischief, provided that he had no absolute definite instructions not to operate" (Hawkins, 1896). The case was an action for damages by a nurse for assault and negligence by a surgeon who removed one ovary with express consent and then, finding the other infected, removed it. In these civil cases, therefore, the cause of action is removed by the patient's consent: *volenti non fit injuria*. Difficulties may, however, arise when the patient has not the capacity to consent (Kloss, 1965).

Liability in criminal law is complicated and unclear; moreover, it is made more uncertain by the changing attitude of the public, the

legislature, and the medical profession itself. This change is apparent, for example, in relation to legislation on abortion or in correspondence in the *British Medical Journal* on sterilization (Editorial, 1966).

It seems well established in English law that the consent of the person to an act, which is unlawful in the sense of being itself a criminal act, cannot render that act lawful (*R.* v. *Coney*, 1882, 8 *Queen's Bench Division* 534; *R.* v. *Donovan*, 1934, 2 *King's Bench* 498, Court of Criminal Appeals). In the eyes of the law anyone who touches the human body assaults or batters it and prima facie commits a wrongful act, which it is for him to justify (Devlin, 1962). The usual justification of a surgical operation is the consent of the patient. It is the essence of assault and battery that they are done against the will of the victim (*Christopherson* v. *Bare*, 1848, 11 *Queen's Bench* 473). Further, it is a sufficient defense to a charge of assault that the act alleged was a mere accident or that it was done while the parties were engaged in a game or sport, which was lawful and not seriously dangerous to life or limb. Nevertheless, in *R.* v. *Coney*, above, it was held that all persons aiding and abetting prizefighting, which was illegal, were guilty of assault, and that the consent of the persons engaged in fighting did not afford a defense.

There may, however, be some cases of assault which are per se unlawful, to which consent would be no defense. This was discussed in *R.* v. *Donovan* (above) where there was an alleged assault by the accused, who had caned a young girl with her consent. The Court of Criminal Appeal was not prepared to hold that the alleged assault could be regarded as per se criminal without evidence that the blows struck were likely or intended to do bodily harm to the girl. In this context, bodily harm has its ordinary meaning and includes any hurt or injury calculated to interfere with the health or comfort of the victim; such hurt need not be permanent, but must be more than merely transient and trifling.

The problem as to what conduct is per se criminal is clouded by the concept of public policy. The surgeon has to consider whether orchidectomy, vasectomy, or lobotomy are contrary to public policy and therefore per se criminal. There are well-established exceptions to the general rule that an act, likely or intended to cause bodily harm, is an unlawful act, for example the playing of games, such as rugby football or baseball, and the reasonable chastisement of a child by a parent or person *in loco parentis* (*R.* v. *Donovan*, above). Moreover, in an abortion case, a prosecution was dismissed where the surgeon performed the operation, having reasonable grounds and adequate knowledge that the probable consequence of the pregnancy would make the woman a physical or mental wreck. For example, in *R.* v. *Bourne*, 1939, 1 *King's Bench* 687, a serious case of rape, the purpose of the operation being the preservation of the life of the mother was accepted as a defense. The Abortion Act, 1967, now provides for the medical termination of pregnancy under certain circumstances and conditions.

Orchidectomy or mastectomy could be safely performed if for therapeutic purposes; but this would scarcely cover cases involving change-of-sex operations in England at the present time, unless there were perhaps an overriding social necessity as in the case of castration of the so-called sexual psychopath (see *R.* v. *Cowburn*, above), sexual deviants, and morons (Bremer, 1959). However, this latter class of cases would have to be carefully watched to see that there was no kind of coercion. It is true that the law and practice appear to be modifying in relation to operations designed to sterilize the patient on eugenic grounds. Voluntary sterilization has never been declared by the English courts to be lawful nor has there been any legislation to authorize such operations, which are known to take place despite the recommendations of the *Report of the Departmental Committee on Sterilization* (1934). However, the legality of a sterilization operation which is necessary for the patient's treatment (therapeutic sterilization) would seem to be established (the 1934 *Report*, above; and *Beatty* v. *Cullingworth*, above). A statement by the Secretary of the Medical Defence Union (1966) on behalf of the Council, which appeared in the *British Medical Journal*, gives some indication of the change in feeling towards eugenic sterilization. This type of operation is performed not necessarily for the patient's health, but to prevent the propagation of unsound offspring. The Council of the Medical Defence Union has advised that an operation for sterilization is lawful, whether it is performed on therapeutic or eugenic grounds or for any other reason, provided there is a full and valid consent to the operation by the patient concerned. It is possible that orchidectomy may one day be subject to a similar change of feeling.

However, orchidectomy may be regarded, in England at least, as an experimental operation. It this country, there is no statute which specifically controls the conditions under which experiments can be done. Lobotomy is a case in point, and there is no doubt that it has been accepted as a recognized form of treatment in certain cases. The criminal law has certainly not been invoked, despite the permanent effect of this operation. It would, however, still appear to be in an experimental stage (*Leucotomy in England and Wales*, 1942–1954).

As regards castration, it is true that other countries have performed such operations and published some material. Denmark is particularly well-known. Such operations are provided for, in proper circumstances, by statute. The results, however, do not seem to be sufficiently convincing as yet to the medical and, in consequence, to the legal profession in England. In this regard, the book by Bremer (1959), reporting a Norwegian follow-up study which revealed a number of examples illustrating the wide margin of uncertainty existing in psychiatric diagnosis and prognosis, should be mentioned. It is possible, should a specific category of case be defined in which orchidectomy might benefit, that some change in attitude respecting orchidectomy will take place. In

the present state of knowledge, drugs are generally considered more suitable than an operation of a permanently enduring nature. As an eminent British psychiatrist observed, orchidectomy is to stilbestrol (a hormone) what lobotomy is to largactil (a tranquilizer).

Conclusion

It is apparent that the law cannot prevent sexual criminals from their activities, though it may correct or deter them to some extent. As soon as the law enters the field of morals, it loses its certainty. Most people would probably agree today that there is no more need to have laws against perverse activities than there is to have laws against an illness. However, the public must be protected to some extent and the line must be drawn as soon as the perversions constitute a real threat to the security and safety of others. Generally, the pressures of society and the need of the individual to be approved is sufficient to keep the individual within the bounds of reasonable conformity.

So far as the transvestite is concerned, the law will not intervene, provided no criminal offense, such as larceny of clothing, is perpetrated in furtherance of this foible, and provided such masquerading is not adopted to facilitate some other offense, such as assault, false pretenses, or soliciting in public. The attitude of the law in England is benevolent: such behavior is tolerated on condition there is no offense; but it is wise for the transvestite to avoid as far as possible appearing in public, since any suspicious conduct might result in police intervention.

An operation, such as orchidectomy, is a much more serious problem since it results in an irreversible situation. Lobotomy is not really an apt comparison, since it does not directly affect the sexual nature of the patient. Drugs are palliatives and their effect is not permanent. Medical science may, it is true, develop grounds on which such operations are justifiable, with the patient's consent, where there is proven social necessity. For "in general, law cannot depart far from ethical custom nor lag far behind it. . . . Jurisprudence, ethics, economics, politics, and sociology are distinct enough at the core, but shade out into each other. . . . But we shall not understand even that core, and much less the debatable ground beyond, unless we are prepared to make continued incursions from each into each of the others" (Pound, 1926). This was written some time ago, and today medicine, embracing psychiatry and psychoanalysis, should be added to this list.

Summary

The legal issues of transsexualism in England are to be considered in relation, firstly, to transvestism and other forms of abnormal behavior.

As regards transvestism, the law does not consider cross-dressing in itself an offense. It is the resultant effects of transvestism that may give rise to criminal offenses which may vary from conduct likely to cause

a breach of the peace to larceny of the desired objects of clothing. In classifying the legal issues the psychiatrists help to trace, apart from transvestites proper, the homosexual, fetishist, and exhibitionist traits in persons adopting this behavior. The law relating to homosexuality between males, lesbianism, exhibitionism, and fetishism is discussed.

As regards transsexualism involving surgery, whether it be orchidectomy, mastectomy or penectomy, this would be rarely, if ever, justified in law in the present state of medical knowledge. The law would countenance such an operation if full consent of the patient is obtained and if the operation is for a proven therapeutic purpose. Otherwise the operation is a criminal assault even if consent is given. What is therapeutic depends on the state of medical knowledge and public opinion at any given time. In England changes are already evident, as is illustrated by medical opinion on sterilization operations, the Sexual Offenses Act of 1967 relating to homosexuality, and the Abortion Act of 1967.

A distinction is drawn between established and recognized therapeutic operations and experimental operations. In the latter category, lobotomy may be cited, and the problems involved may be well illustrated by the present much discussed heart-transplant operation. The law, as regards experimental operations, places a heavy burden of proof on the medical profession to show the therapeutic value of an operation, such as orchidectomy. The "medical profession" means all those persons engaged in the study and practice of mental and physical illness, including the psychiatrist and the psychoanalyst.

CHAPTER 31

LEGAL PROBLEMS RELATED TO TRANSSEXUALISM AND SEX REASSIGNMENT IN DENMARK

Georg K. Stürup, M.D.

Transsexualism as defined by Benjamin (1966) undoubtedly has existed always. However, it used to be evaluated differently in the past, just as it is still being evaluated differently in different parts of the world. The possibility of living in a legal manner and in accordance with their own wishes is often limited for these people.

An Eighteenth Century Example

The oldest case I have seen in Danish legal literature concerns a girl, Karen, who was pregnant after an affair with an upper-class person. Together with her woman friend, Maren, she went to another provincial town, where she had the child, who was then put up for adoption. The women then both went to Copenhagen where in 1722 they married. Karen behaved now as a man and made his living as a ladies tailor, while Maren worked as a pantry girl at the royal castle. It was their idea that after the marriage she should help her "husband" in tailoring and now and then take some work in the royal kitchen.

After some time, marital quarreling developed. The couple's defense lawyer later wrote a report, found after his death, of what happened to this couple. He believed that no one could reconcile them in their conflicts as they did not dare to reveal their strange marriage to anyone. Because of these quarrels the husband (Karen) left Maren and took a job as male cook on a warship. After some years he returned to Maren, but still they did not get along well. The husband then left again and worked for another two years in the countryside on a farm and then as outrider in a Swedish county, where he worked for several years. When he returned to Copenhagen once more he did not look up his "wife." In the meantime, Maren had been divorced by a court order

because her "husband" had been missing for such a long time, and she remarried.

When working as a cook on the warship, Karen had loaned money to the boatswain. Still dressed as a man, Karen was in need of the money and wanted it back. The wife of the boatswain and Karen's former "wife" (Maren) were friends, and Maren now disclosed to her friend that Karen was not a man but a woman. So when some days later Karen pressed again for the money, she was arrested and eventually sentenced to hard labor for life. Maren escaped with a sentence of two years for collaborating in this unnatural marriage (*Danske Kriminalsager fra ældre tid*).

Similar problems are seen in our time, but now they appear more openly and result in legal problems of less serious consequences and are dealt with usually at an earlier age.

A Modern Example

A typical case is Alma, who stressed that she was a man, looked like a man, and wanted to be accepted as a man. A psychiatrist evaluated her case, considered this idea to be of a paranoid character, and remarked in his report that the patient's understanding of being masculine was incomplete. The fact that the patient seemed to be dominated by this feeling was explained as a paranoid idea of expansive character.

The patient was twenty-two years of age at that time. From five or six years of age, she had preferred to use boys' trousers. Already before puberty she was clearly boyish in her pattern of behavior, and from sixteen to seventeen years of age she was openly engaged in homosexual relations with other girls. At the same time, she stressed more and more seriously that she was a man, and started proceedings to get this idea legalized. From sixteen years of age on, she had not been socially well-adjusted.

This patient was completely dominated by her idea that she had a male soul and that her appearance was masculine. Verbally she could be corrected, but it is described in the report that shortly after this she would react in accordance with her ideas of being a man. She talked about situations where she thought she had been accepted as a man, but her explanations concerning these situations seemed to depend mostly on her preconceptions of being accepted as such. The psychiatrist noted that her concepts had the awkward logic of a paranoid. "I have a man's feelings for a woman; therefore, I am not homosexual," and "since I am not a homosexual, I must be a man." He diagnosed the case to be either an initial stage of an expanding paranoic state or a pseudoneurotic schizophrenia.

In 1964 this patient applied to have her first name changed so she could have a more masculine-sounding name, but, after long deliberations, this was not permitted. Also a petition for reassignment of sex was refused. However, she was officially permitted to wear male dress as

long as she obtained a letter from the Ministry of Justice, saying that there could be no objection to her use of male dress, if it was used in such a way that it would not violate the police ordinance concerning public decency. With this letter the dress she had used for years was legalized.

Legal Problems

The case illustrates some of the legal problems which are related to the psychosurgical treatment of transsexuals. One of the questions is: Is transsexualism a psychotic idea? Pauly (1966) found that only nineteen percent of transsexuals were psychotic. Baastrup (1967) stated that he found that one third of thirty transvestic males belonged to what he called the psychotic group. This group was mostly the same group as that called transsexuals by Benjamin; Baastrup supposed that these patients' feeling of belonging to the opposite sex had the character of a paranoid idea and wanted to classify such patients as paranoic.

It is not my impression that this is correct. Through many years I have had contact with several such patients and their future lives demonstrate to me that a paranoic development is not a general phenomenon in these cases. The operated cases I have been able to follow seem to react in a satisfactory way as from a social and personality adjustment point of view.

Another question has legal implications: Who should have the rights to dress in the clothes of the other sex; to obtain surgical and hormonal sex reassignment; and to be permitted a change of name?

Finally, as the last and a very essential problem, there is the question concerning marriage between a person who has obtained sex reassignment and another person of the same somatic sex. The following attempt to answer these questions is based on Danish practice.

The legal problem became a reality in 1950, when a foreign citizen[1] twenty-four years of age, came to Denmark in order to obtain special medical treatment which he found necessary due to his psychological suffering. His medical history recorded what was medically identified as homosexual drives, and he wanted to live as a woman.

A few months after his arrival in Denmark this patient was treated with female hormones and this treatment stabilized him psychologically. Some six months later his doctor asked the Ministry of Justice if the young man could obtain a permit for castration. The Ministry denied the request, referring to the fact that the patient did not have domicile in this country. It was then stressed that the applicant had intentions to live permanently in Denmark and the Ministry replied that if this was the case, the permission was not principally excluded, but that, due to

[1] This is the now well-known, autobiographically published case of Christine Jorgensen (1967). [Editors]

the young age of the applicant and the short stay at the time, a new request would probably not be granted immediately. When a new request for castration was filed nearly one year after his arrival in Denmark, it was denied by the Ministry of Justice again.

CASTRATION

In accordance with Danish law (No. 176 from 1935 concerning Permission to Sterilize and Castrate, Amalienborg, 11th May, 1935, Section 2, Part 1), permission to castrate a person may be granted by the Ministry of Justice, after the matter has been approved by the Medicolegal Council, when the sexual instincts of the person in question either make him liable to commit crimes, thus constituting him a menace to society, or cause him appreciable mental anguish and injury to his standing in society. In addition, the following conditions must be fulfilled:

A petition must have been filed, accompanied by a doctor's certificate and containing adequate information about the determining reasons for the petition. It must include a statement to the effect that the person making the petition—provided that the petition is not being filed by the directors of an institution—has received advance information from a doctor as to the probable consequences of the operation. If the person in question is married and if marital cohabitation has been broken off by judicial separation or by any prolonged actual separation, then a statement shall, if possible, be obtained from the spouse.

Further it is necessary for psychically normal persons to have reached the age of full majority (twenty-one years) and to petition themselves for castration.

The Medicolegal Council, which in all cases has to evaluate the medical information, is an important medicolegal body. The chairman of the Medicolegal Council is Professor in Legal Medicine at the University of Copenhagen. The Council has two sections, a general medical section and a psychiatric section. In the psychiatric section there are seven members. As a general rule, three of these psychiatrists participate in the evaluation of each case and answer questions of a psychiatric nature posed to the Council. Only public organizations such as courts, ministries, and administrative bodies can have their questions answered.

In the case discussed here, the Medicolegal Council advised that the permit should be granted. A new petition to the Ministry of Justice resulted then in a permit for castration sixteen months after the patient arrived in the country. At the same time, the Department of Health made it known in an announcement to Danish doctors that, in the future, it could not be expected that foreigners, who had not been domiciled in this country, would be granted a permit for sterilization or castration.

After the operation, the patient dressed as a woman and appeared quite

natural, free and satisfied. A plastic operation was carried out subsequently. For this feminizing operation on the genitalia no special permit was required, but it resulted in considerable press coverage. The final outcome of the treatment may now, after sixteen years, still be classified as excellent.

Dress

Police regulations for Copenhagen state that no one must appear in a dress which violates decency and equivalent statements can be found in police regulations for other districts. In practice this rule applies to men dressed in women's clothes. In spite of the regulations, petitions are sometimes granted to obtain a permit to dress as a female in public. This is granted only if standards of orderliness are not infringed upon and if there is a medical reason for it. The police are especially anxious to prevent homosexual prostitutes soliciting dressed as women. The permit is not being granted if the Director of Police objects. Generally, the petitions are answered in the manner mentioned above in the case of Alma, that is, with the understanding that under special conditions the police will not interfere, although such an indirect permission can result in practical difficulties, for example, in relation to toilets and public baths. Certificates have been given to transsexually operated persons, granting that they can frequent toilets and public baths.

This was the case of Bertel, a masculine appearing person, who applied for a permit for castration at twenty-six years of age. The Medicolegal Council advised against castration, considering his general simpleness, naivete, and youth. But the Medicolegal Council advised that he, as a transsexual, could obtain a permit to use women's dress.

Bertel had been rejected from military service due to neurotic symptoms and he started to use feminine dress and hairsetting at this time. He was very depressed when his castration petition was not accepted and the psychiatrists treating him reapplied after a year. Then the permit for castration was obtained and castration was carried out when the patient was twenty-eight years of age, after which he obtained a change of name. This patient's somewhat masculine general appearance made it necessary to request a special permit to frequent women's toilets and baths. In reply to this request a certificate from the Ministry of Justice notified the patient:

> . . . that no objection under special mentioned conditions would be raised against your using female dress, that the Ministry of Justice on the . . . [date] has allowed you to submit to castration, which operation was carried through on the . . . [date] and that the Ministry of Justice on the . . . [date] informed X county that no objection would be raised against your obtaining a certificate of change of name [girl's name], which certificate of name was issued on the . . . [date]. It should be added that the Director of Police in Copenhagen has informed the Ministry of Justice that the police force will not take action against your using public baths or toilets for women.

Change of Male Name to Female Name

Problems with names are not new. In 1930, a change of name was granted to a forty-eight-year-old man, who was described as a pseudohermaphrodite in a foreign special medical certificate. The external male sex characteristics were removed by an operation and an ovary was transplanted, but the Medicolegal Council supposed that no proof could be found that the person was a woman because the external secondary sex characteristics had been purely masculine. This was in spite of the fact that an "investigation of the secretion of the sex glands" supposedly proved that in reality the person was a woman.

If we exclude, as we have done until now, cases whose sex characteristics have been wrongly determined at birth and if we consider transsexuals only, it becomes apparent that castration is usually requested before a change of name. If castration has been carried out, it is supposed that the person will be sexually neuter and in consequence reasonably certain not to practice a camouflaged homosexuality. It seems the patient did not deem necessary to request removal of other external male sexual characteristics.

Change of Female Name to Male Name

A few such cases are known. In one case, the Medicolegal Council advised change of name, even if castration was not yet performed.

There is good reason for a precautionary course, however. Note the following complex case of a masochistic transsexual woman who believed herself to be a man, though physically she was clearly a woman, albeit a very slender and boyish one. She became the passive partner to a male, in a masochistic "homosexual" intercourse in which the aggressively acting male partner performed what he believed in his ecstasies to be a coitus in ano; to his—and her—later great surprise, he made his partner pregnant.

In cases of female transsexuals, it should be absolutely certain that there is a guarantee against risk of pregnancy before the change-of-name certificate is obtained.

Marriage

The problems fall in two groups: first, concerning the continuation of a marriage already existing; second, concerning entering a new marriage. According to Danish law, a marriage is to be considered a relationship between a male and a female, and becomes only a nullity when some formal conditions are not fulfilled. If necessary, it may be annulled.

The proof that a person is a male or a female is not difficult as a

rule, but it may in some cases create great problems even for the best medical experts, as in cases of hermaphroditism.

An example of Danish court practice that shows the annulment of a marriage is the case of Clement—later Clementine. It concerns a couple in their fifties. Clement was a transsexual who, from childhood, had used every opportunity to dress in women's clothes, which caused him many difficulties. At twenty-four years of age he moved in with an old man who permitted him to wear female dress as soon as he came home from work. Here he became acquainted with the daughter of his host and, on her suggestion, moved in with her as her roomer. They lived together as girl friends. When the house was sold, the new owner of the house wanted Clement to move out, as the tenants were not allowed to have roomers. In accordance with her strong wishes, Clement then married his friend. There had never been a sexual relationship between them.

Since his young years Clement had been asking for help from different doctors, but without result. Then, a year before the case was brought to court, he was legally castrated and six months later he obtained a plastic operation so that the male sex characteristics were removed. At this time he had also obtained a permit to wear female attire in public.

The Medicolegal Council established that he was not now a woman, but a sexually neutral person. Psychologically he was mainly female, although at the time of entering into marriage he was determined to be a man.

The court decided that the existing marriage had been legally correct, but after the operation, based on the opinion from the Medicolegal Council concerning his physical and psychological state relative to sexual relations, established that he could not continue to live in marriage with a woman. The marriage was then declared not valid.

It is known that Clementine, formerly Clement, later married a man.

SUMMARY

Generally, no problems are created when women dress in mannish clothes, as long as this happens in a decent way. The decency rule is less tolerating when considering males who publicly dress as females. Due to the relationship between homosexual prostitution and crime, and due to the fact that some wanted criminals have a greater opportunity to hide in female dress, it is understandable that in some cases police authorities are reluctant to support males' requests to obtain permission to dress as females. The risk of such permission seems, however, to be very small.

In clear transsexual cases I would prefer the authorities first to give permission for the patient to dress as a female, so that he could gain a practical experience of what the meaning, advantages, and also the disadvantages of such a pattern of behavior are. Generally, I would

suggest that permission be given after an energetic period of estrogen treatment has demonstrated that the absence of penile erections for a substantial period of time is experienced as something desirable.

In accordance with Danish law, the condition for castration must be that the patient's way of life causes him appreciable mental anguish of the kind that can be abolished through the operation. If a long period of hormonal treatment has resulted in psychological stabilization and the experiences after permission to dress as someone of the opposite sex have been satisfactory, then there is a good basis for advising castration.

This is easier if the previous sexual activity has been very limited and more difficult in cases with considerable sexual activity. In accordance with Danish law it is only the removal of testes which calls for juridical permission. The plastic operation, which may follow, can be performed in Denmark in accordance with free medical evaluation. In many cases it is reasonable to carry on the plastic operation in direct relation to the castration.

A change of name certificate is obtainable in Denmark when, after castration, sexual neutrality is obtained. This means some change in sex role, even though the opposite sex role might not be actually obtained. In a few cases, operated persons, after the change-of-sex operation, have married in the marital role in accordance with the new name. In the few cases where this is known to have happened it seems not to have resulted in serious problems.

CHAPTER 32

MEDICOLEGAL ASPECTS OF TRANSSEXUALISM IN SWEDEN

Jan Wålinder, M.D.

In current discussions of the sex role, critical attention is being frequently turned to the implicit principle that men and woman should have different ascribed positions and responsibilities in the community. A rigid fixation of social and vocational sex roles is frequently seen as unfortunate from not only the purely humanitarian but also the civil, economic, and other viewpoints. There is a growing understanding that the individual's own predisposition and abilities and desires must have an opportunity to come to the fore, regardless of sex. Even if modern attitudes contribute toward greater equality between the sexes, the sex identity of individuals is still of a great practical importance.

The general consideration of sex roles has not been limited to the question of what social, economic, or other characteristics differentiate the two sexes, but has been broadened recently to include the question of what is the basic nature of the sex difference. Naturally, of particular interest have been those cases which are difficult to judge even from the medical point of view.

Ordinarily, a person's appearance, clothing, carriage, and mannerisms clearly point to one sex, and further clarification is seldom necessary because the presumed sex identity almost always agrees with the sex assigned at birth.

In some instances, however, the assessment can become doubtful. Especially interesting in this context are those persons with anomalies of a somatic or psychic nature which result in confusion when a person's correct sex is being determined. The various factors used by, for example, Money, Hampson, and Hampson (1957) and Hampson and Hampson (1961) as indicators of the male or female sex do not provide a consistent guide in either direction in these confusing instances. As

far as these factors are concerned, these individuals display both male and female characteristics. When discrepancies between one or more of these factors exist, one can infer, like Armstrong (1964), that it is a question of an intersexual condition. It is known that intersexuality has various forms; these can be roughly divided into two main types: 1) conditions with clearly apparent somatic intersex characteristics and 2) conditions where these are lacking. The former group is not to be considered in detail in this chapter; the latter includes individuals characterized by uncontrollable feeling of belonging to the opposite sex, the transsexuals, who often seek solution to their dilemma in surgery.

In Sweden, up to the present, the legal problems arising from intersexuality have not been the subject of any systematic treatment. Whenever the question of re-evaluation of a person's sex has arisen, the legal suitability has been resolved with regard to the particular case. In doubtful instances, the assessment has been made in accord with the opinion of the Royal Medical Board or other medical experts. A survey of medical literature in this field gives the impression that criteria for change-of-sex procedures, although they leave much to be desired, are clearly less restrictive in Sweden than in other countries.

A person's sex identity has legal significance for various reasons. Of great importance are the laws covering marriage which are based on the assumption that only a man and a woman can be joined in wedlock. The age limits are different for each sex: men under twenty-one and women under eighteen years of age may not marry without official sanction of a local authority. According to certain criminal code regulations, the liability is determined depending on whether the perpetrator or the victim is a male or a female. The Swedish military conscription law covers only men. The workers' rights law of 1949 contains special provisions on the employment of women. Most social legislation, including taxation of families, takes into account in many respects the sex of the individuals. These few examples of the individual intricacies of this subject should suffice to indicate some of the legal implications related to an individual's sex.

There is no statement or definition of the male or female sex in the current legal code or in legal practice. To aid in the identification of an individual, a description is entered at birth by the local priest in the National Census records kept by the church. This registration includes sex as well as birth number and given name, and the designation of the individual's sex status is based on information given by the notifying party. Should the information not agree with the actual sex, it can, in principle, be changed. If a change in the registration is requested, special provisions of the so-called National Census regulations must be observed. According to these, an application can be filed with the parish Bureau of Census and Taxation which may, after investigation, respond by making temporary changes in the registration records to concur with

the application. The Boards have to query the National Census Board before they act on changes of this type.

The official determination of an individual's sex identity thus consists of a parish census registration, recording sex, birth number, and given name. The name combined with the birth number in particular is widely used in both official and private transactions, which results in the registered sex identity becoming also widely known because even numbers designate females and odd numbers designate males.

It is difficult to estimate the number of intersexuals (transsexuals plus persons with marked anatomic deviations) in Sweden. An investigation concerned with persons over fifteen years of age (Wålinder, 1967) discovered 110 transsexuals in this country, which would indicate a prevalance of about one in 54,000. This figure must be considered minimal and the true number of persons with transsexualism could be expected to be greater. There is no known similar census of persons with somatic anomalies. However, inferences can be drawn from the material which exists concerning exchange of the given name for a name associated with a person of the opposite sex. Of a total of thirty-nine requests of this sort which have been submitted from 1946 up to June, 1967, twenty-nine were made by transsexuals, six by hermaphrodites, while three persons sought correction of faulty decisions which could not be associated with intersexual anomalies. In the light of these figures one can assume that the persons with somatic disorders are a small group in Sweden in contrast to the transsexuals.

It was pointed out earlier that directives are lacking on what, according to the Swedish judiciary, should differentiate the sexes and that dubious cases to date have been generally judged on the basis of expert medical opinion with regard to the circumstances in each particular case. In all of the aforementioned thirty-nine instances, a change of the given name was granted, but changes in other areas have been accompanied by much confusion, which means that the majority of the applicants have obtained a new given name corresponding to the desirable new sex role, but remained registered in the census records with the same sex as before.

Although the recommendations of the Royal Medical Board have been consistent in ordering a change of given name, there has been a lack of uniformity in the evidence considered acceptable. The background investigations have differed in regard to depth and findings. In some instances, a brief medical report seems to have been sufficient, stating that the individual, who formerly was considered a man, should be permitted to be known as a woman for psychological reasons. Nevertheless, the medical examination has usually been comprehensive and based on a long-term knowledge of the applicant. Where hermaphroditism was concerned, the doctor's decision was uniformly based on the presence of male or female gonads. Since these indicated a sex opposite

to that recorded earlier, the changes requested and granted included the given name, birth number, and probably sex registration.

Concerning transsexuals the attitude has been more variable. Usually the performance of castration or plastic surgery has not been considered a requirement for name change or other adaptive measures. It can be said that conflicting medical opinions are held on the significance of such surgical intervention. In some early cases, the National Census Bureau has required a change of sex registration as a condition for exchange of given name and the question was submitted to the King for a decision. In the majority of recent applications the name change was granted but the applicant has been obliged to continue with the earlier description of sex and usually birth number, in spite of the change in given name.

It might be of interest to present some relevant details concerning the forty-three transsexuals, thirty men and thirteen women, who were the subjects of my study. Ten men had their names changed legally, all after estrogen treatment and six in combination with a conversion operation. In five cases a change of birth number indicating sex identity was made.

Eight women had their names changed legally, all after treatment with androgens and seven in combination with a removal of their breasts. In six cases there was also a change of birth number and sex identity.

What has been said should point to the inconsistency and confusion in present practice as regards the possibility of an individual's obtaining official sanction of, and concurrence with, a change of sex designation which is desired by the individual and medically supported. Particularly noteworthy is the situation in which the transsexual may have to live with the discrepancy of sex identity caused by a change of the given name associated with a contrary sex description and birth number. The doubt in regard to sex identity, which comprises the transsexual's psychologic handicap is fostered by an enforced existence at such a half-way stage and is often extremely distressing for the individual.

There can be no question as to an obvious need for regulations and precedents more flexible to fit the person's special circumstances. It must be eminently clear to everyone who comes in contact with these problems that this small group finds itself in a most disturbing and intolerable situation. For many of these individuals suicide is the only escape. Although the confusion surrounding the judiciary attitude is probably of less importance than the uncertainty of their sex identity per se, the anxiety related to their comprehension of their own sex identity could be relieved, particularly for the transsexual, by an unequivocal external confirmation. Only in this manner can the suspicion or hostility in their surroundings be diverted, and the transsexual's timidity be reduced. This timidity often takes the form of inability to seek work, register for voting, apply for passport, driver's license, et cetera, or in

any other instances where official sex identity can be required. The difficulties have been officially recognized by requests for legislation from the Department of Justice. In the fall of 1966, the Department of Justice set up a committee to examine certain questions concerned with change of sex identity. New regulations for processing such requests, particularly in relation to transsexualism, are urgently needed.

At present, it seems that medical procedures for creating a new sex identity in transsexuals are, so far, more promising than other forms of treatment. Many findings reported in this volume support the need for new legislation concerning transsexualism and sex reassignment. At the moment, no other treatment is known to give any comparably lasting effect.

CONCLUSION

Richard Green, M.D.

Gender identity is a fundamental life characteristic, the awareness of oneself as male or female being a basic component of personality. Yet, much remains to be learned about how masculinity and femininity develop in man.

Two diametrically opposed strategies have been traditionally pursued in the study of medical phenomena. One proceeds from the study and understanding of the normal to eventual inquiry into the abnormal. The other examines deviations from the norm in the hope of better understanding normal processes. Within this latter strategy lies the considerable research value of the study of transsexualism.

The pioneering studies described in this volume have just begun to dent the surface of this research potential. These studies have not been easy to initiate: With no other subject in medicine does the study and treatment of a human phenomenon pose more controversy—engaging issues of morality, medical ethics, the law, psychiatric theory, and the individual's right to self-determination.

To a considerable degree, the medical profession itself is responsible for the limited extent of knowledge which currently exists about transsexualism and sex reassignment. While the current availability of gonadal hormones and the refinement of surgical techniques have made it possible to partly realize the fantasies and aspirations of the transsexual and have brought about an increasing demand for sex reassignment, medicine, by closing the door to these patients for study and treatment, has cast away a population from whom considerable information about gender identity and human sexuality could have been obtained. Particularly in the United States, until very recently, sex reassignment has been nearly unobtainable. Thus transsexuals sought treatment elsewhere. Consequently, neither preoperative screening nor postoperative evaluations were made. Rejection of the transsexual's request, rather than pre-

venting him from obtaining surgery, resulted in the highly motivated, affluent patient still being able to obtain his reassignment, but, in the process, being virtually lost to scientific study.

From the preliminary data now available, certain issues are finally being clarified. However, many more questions remain.

Research into the etiology of transsexualism will proceed on many fronts. No one now, be he psychoanalyst or neuroendocrinologist or expert in any other science, can claim to have the complete explanation of transsexualism.

At the experiential level, more data are needed as to what transpires between an infant or small child and mother, father, and siblings in the shaping of gender identity. Longitudinal, large-population studies with direct observation of mother-infant and mother-child interaction, with subsequent evaluation of the child's gender orientation, may help clarify the void currently glossed over with retrospective adult statements as to having been "close" to mother or "distant" from father. Recent research into dynamics of the parent–child interaction in families in which a boy is displaying extensive feminine behavior has moved a step away from the distortions and condensations of retrospective accounting.

From the neuroendocrine approach, the eventual availability of measures of circulating gonadal hormones during prenatal development may provide a tool with which to evaluate in man the significance of recent data pointing to the influence of prenatal hormones on subsequent sexual behavior in animals. Current neuroendocrinological experiments with monkeys, guinea pigs, and rats indicate that androgen is necessary during a brief developmental period to defeminize or masculinize areas of the brain which mediate social and reproductive behavior. A deficiency of androgen in the male results in the capacity for subsequent display of feminine behavior and an excess of androgen in the female results in a suppression of feminine behavior and an enhancement of male-type activity. Thus a juvenile female rhesus monkey exposed to excessive androgen prenatally behaves more like a juvenile male rhesus monkey than does the female not exposed to androgen, and male rats deprived of androgen during a brief neonatal period are capable of displaying the female sexual posture as adults while normal male rats are not. Whether this model can be extended to man, resulting in "a female mind trapped in a male body" is at present a provocative speculation. While large-population surveys of prenatal androgen levels with subsequent evaluation of gender behavior would be at least as formidable a research endeavor as extensive longitudinal studies of mother-child interaction, the implications are also considerable. As more understanding emerges of neurochemical mechanisms and the influence of gonadal hormones on nucleic acid metabolism, yet another avenue of basic research may find applicability in studies into gender-related behavior.

Studies of gonadal hormone metabolism in adults will also proceed as more sophisticated assay techniques evolve. Not until more is known of the normal metabolic pathways can definitive statements be made as to whether transsexuals differ in any significant way that cannot at present be measured. Additionally, controlled studies are needed of the psychologic and physiologic effects on transsexuals of contra-sexed hormones and hormonal blocking agents. For example, the "calming effect" reported for estrogens in male transsexuals should be studied in a double-blind study using a placebo and additionally compared to the effects of the nonfeminizing, antiandrogen, cyproterone acetate.

More understanding is needed of how both normal and aberrant gender identity is interrelated with other psychologic dimensions. Among the problems to be clarified is the precise nature of the male transsexual's statement "I feel like a woman" and to what extent the cross-gender identifications reflect a distorted or accurate perception of the other gender.

Normal physiological and behavioral sex differences need further definition with subsequent utilization in studies of the transsexual. More data are needed on preferential responsivity in males and females to various erotic stimuli, for example to olfactory, tactile, visual, and fantasy cues. Basic physiological and psychological differences between the sexes need to be established under various cognitive, perceptual, and stress situations, including studies of dreaming. It would be relevant to know whether these variables in transsexuals are in greater consonance with their anatomic or their preferred psychologic sex, and whether they prove to be modifiable through hormonal or experiential manipulation.

The variables on which transsexualism, transvestism, and homosexuality overlap and on which they are separate are not entirely clear. The various experiences through which a person evolves to a normal or aberrant position in sexual object choice, gender identity, or gender dimorphic clothing preferences still require considerable elaboration.

An area of great practical as well as theoretic significance is research into the childhood diagnosis and treatment of cross-gender behavior. Faced with the formidable dilemmas of treatment during adulthood, an eminently desirable innovation would be effective diagnosis and treatment during childhood. Cross-gender behavior can be clearly evident in children aged two to five years. Longitudinal studies of such children will furnish a more reliable index of the harbingers of adult transsexualism. For the present, one must be content mainly with indirect evidence of retrospective reports by adult transsexuals and the study of children behaving in a manner similar to that described in these reports. The extent to which gender identity and behavior is malleable during childhood remains to be determined. Whether the best results will come from treatment based on the theoretic framework of psychoanalysis,

from modification of parental roles to provide a more effective environment for appropriate gender-role modeling within the framework of social learning theory, or by behavioral change through classical conditioning techniques remains to be determined.

The prospect for discovering a new technique of psychiatric treatment to reorient the adult transsexual's gender identity remains open. At present psychiatric experience with transsexuals has been limited. Many transsexuals have had passing contact with psychiatrists, but only a few have had extensive psychiatric treatment. In these cases, it appears that treatment by methods ranging from psychoanalysis to conditioning procedures has failed to alter gender identity. Current data indicate that, with a person whose gender identity has been contrary to somatic sex since childhood, it is unrealistic to expect that a reversal will take place in adulthood. The issue can also be raised whether, even if long-term psychiatric treatment were capable of reorienting gender identity in the transsexual, it would be morally justifiable for medicine to dictate that one long, expensive form of treatment is to be made available while an alternative is not. To what extent ought the patient have the right to choose his own course, as long as there is reason to believe that either procedure can result in a better social adjustment and that neither the individual nor society will be harmed?

In the current absence of success in reorienting gender identity by psychologic methods, medicine has turned to surgical and hormonal reassignment. The criteria by which reliable prediction can be made in evaluating the preoperative patient who can be expected to have a satisfactory outcome needs continuing longitudinal study. More needs to be learned about assessing the preoperative patient's motivation for surgery, the extent to which he should demonstrate his capacity to pass in society and support himself in the desired gender role, and the degree to which life expectations after reassignment appear realistic. Those psychiatric difficulties which appear to be improved by sex reassignment and those which can be expected to persist remain to be documented. Being able to evaluate which patients through their gender identifications, previous life experiences, physical appearance, and psychiatric status can be expected to make a satisfactory postoperative adjustment rather than experience disappointment and the continued inability to assimilate into society remains a considerable challenge to psychiatric research workers in this area. In the meantime, the preoperative and postoperative assessments reported in this volume represent the most comprehensive body of follow-up data to date. They support the contention that in the majority of persons in whom cross-gender identity is extensive and of long-standing duration, and who are emotionally stable outside the area of gender identity, conflict can be significantly lessened by sex reassignment.

Critics of sex-reassignment surgery, for even carefully selected cases, have objected on grounds which include the argument that surgery is a

symptomatic treatment, rather than addressing itself to the underlying psychiatric problem of aberrant gender identification. They have also objected that transsexuals are psychotic, that surgery collaborates with the patients' delusions and that the request is analogous to a situation in which a person asks to be blinded not to see hallucinations, or to have his hands cut off to limit masturbation.

The first criticism has theoretic merit. Intuitively, it does make more sense to treat the underlying disease. Unfortunately, it disregards the fact that much of contemporary medicine is palliative and symptom-oriented rather than specific, aimed at etiology, and curative. Cancer surgeons would much prefer to treat a patient's disease by less radical means than removing a leg and conducting an extensive lymph node dissection, followed by cobalt irradiation, and a period of watchful waiting in the hope that the effort has been successful. Those treating rheumatoid arthritis would undoubtedly appreciate a better understanding of the underlying disease and more comprehension of how steroids alleviate the symptoms. But, for the time being, they settle for less. To await the more fundamental refinement would be to do nothing for the patients currently afflicted with these disorders. The fact is that for the time not only does medicine have much to learn as to the causes of transsexualism; medicine has also yet to see demonstrated any other means of treating these patients with any prospect of relief of suffering.

The argument that sex-reassignment surgery is collaboration with psychosis falters on two grounds. Currently available psychiatric interview and psychologic test data indicate that the person requesting sex reassignment rarely is psychotic by the standard diagnostic criteria. Furthermore, there is no body of evidence, from other psychiatric conditions, which demonstrates that fulfilling a patient's delusion or ostensible delusion results in psychiatric improvement rather than an extension of the delusional system and further decompensation. Postoperative data on transsexuals indicate that such an adverse result is rare. Finally, the analogies alluded to above are, like many analogies, not entirely fair or appropriate. It is difficult to imagine, or to find evidence, that blinding a man or amputating his hands will render him a better adjusted, socially improved individual. Society affords limited opportunity for such handicapped, deformed people. The operated transsexual, by contrast, according to currently available reports, may assimilate into society in an acceptable and productive way with a measure of success superior to that achieved prior to reassignment.

Much of the criticism of sex reassignment comes from those who object on emotional, moral, or theoretic grounds and who have had no or little direct experience with such patients. Without direct patient experience, it is difficult to concede the extent to which a person born a male can convincingly appear as a woman with no hint of masculinity. It is difficult for a male to empathize with another male who requests

that his testes be removed and his penis be partially amputated and reconstructed as a vagina. It is difficult to imagine that such a person, or the converse of a woman wanting to be a man, is not crazy.

The law must share with medicine responsibility for some of the transsexual's plight. Even if the transsexual has successfully negotiated surgical and hormonal reassignment, the problem remains, in some states and countries, whether what has been granted medically will be acknowledged legally. The role of the law in this innovative pursuit in medicine remains to be clarified. While the law has no definition of what constitutes maleness or femaleness, it does concern itself with such issues as dress, social conduct, civil status and marriage. It can be argued that the law should be elastic enough to allow the individual wide personal latitude, if by such allowance the public good and another individual's rights are not jeopardized. It is an issue for civil libertarians to consider whether it should be the rightful concern of the law to deny one the right to dress as one wishes, conduct one's life in a preferred gender role, privately conduct one's sexual relationship as preferred by oneself and one's partner and even to marry in the preferred sexual role.

Medicine must decide on its position relative to the majority expectations and standards of society. On potentially controversial issues, shall it keep pace with the public, inch forward in small innovative steps, or move out boldly? Traditionally, physicians have been a conservative group. However, with advancing technology, medicine has the potential for radical departures from former practices, and may find itself confronted with a violation of what was previously deemed sacred. The controversy over hormonal contraception and organ transplantation are current examples. Had cardiac transplantation been subjected first to public referendum it is possible that the first such operation would not have yet been performed.

Certain precedents in medicine have set a climate in which innovation has been rendered more difficult. One basic criterion by which malpractice suits have been judged is whether a given procedure is standard practice within the community. If not, the physician's act is more difficult to support. While such a baseline safeguards the public against wanton experimentation, it may also inhibit justified inquiry. Currently, it would appear that the majority of the public, professional and lay, might not approve of sex reassignment if forced to commit themselves to an opinion. A physician would find himself in a difficult position if a postoperative patient were to experience great disappointment with reassignment and bring suit into a court. In such potentially explosive circumstances, individual researchers and practitioners of medicine must decide whether scientific inquiry, medical knowledge, and the potential relief of human suffering can be advanced in the pursuit of an unpopular innovative program and whether the pursuit is worth the incumbent risks.

The ethical judgment of what is medically sacred is not static. With the passage of time, previously unacceptable intrusions into the sanctity of the body have fallen away before the enlightenment of inquiry, objective reappraisal, and common sense. Rigid ideological dogma has been gradually eroded by the press of science. To dissect a cadaver was historically a much more serious breach of medical ethics than is at present the transplant of another man's heart. As sacred as is the body in its general sense, man's genitals are even more sacred. It is perhaps the most inviolate of the body's features—the identifying characteristic first noted at birth.

The advancement of knowledge will not be assisted by quagmired conservatism any more than by reckless unsystematic abandon. With caution and the discipline of scientific inquiry, advancement will be made into areas previously governed by ignorance and superstition. The research described in this text into the nature of an unusual human anomaly is consistent with the tradition of scientific inquiry and medicine —to identify basic phenomena, understand underlying mechanisms, dispassionately assess methods of resolution, and in the process try to reduce human suffering. This is the essence of current interest in transsexualism and sex reassignment.

GLOSSARY

abducens nerve: the sixth cranial nerve; it regulates motion of the eye.

acrylic: a synthetic transparent plastic resin which can be used in the body, as in dentures, without corroding or deteriorating.

adnexal: belonging to the associated organs or parts; used especially to refer to the ovaries and their ducts (fallopian tubes) in relation to the uterus.

adrenal cortex: the outer layer or rind part of the adrenal gland, as compared with the medulla, or core part.

agenesis: partial or complete failure of an organ or part of the body to form or develop.

alveolar: pertaining to an alveolus or acinus; for example, a saclike chamber at the end of a duct, as in the milk-producing structures of the breast.

amenorrhea: absence or failure of the menstrual periods.

anastomosis: the formation of a passage, by surgery or disease, between two normally distinct spaces or organs.

androgyne: individual who shares male and female characteristics equally.

androstenedione: one of the variant forms of male sex hormone, measurable in the blood.

androsterone: one of the variant forms of male sex hormone, measured as one of the 17-ketosteroids in urine.

anosognosia: failure to recognize a part or parts of the body as one's own.

apomorphine: a drug derived from morphine which produces nausea and vomiting.

aponeurosis: a white, flattened, ribbon-like tendon.

areola (*plural,* areolae): the area of pigmented skin immediately surrounding the nipple of the breast.

aspermia: failure of sperm formation in the testicles, with resultant infertility.

asthenic: characterized by lack of strength and energy; slender in physique.

atresia: imperforation, absence or closure of the normal opening.

atrophy: withering or wasting of tissue which is starved, unable to accept nourishment, or not used; the opposite of hypertrophy.

augmentation mammaplasty: a plastic surgical procedure on the breasts to increase their size usually by means of a silicone sponge material.

autogenous: originating within the body.

aversion treatment: a form of psychologic therapy based on Pavlov's theory of conditioned reflexes; an unpleasant stimulus (like an electric shock) is paired with an undesirable stimulus (like being sexually excited in response to the thought of cross-dressing), until the latter behavior is extinguished out of existence for a period of time.

avulsion: separation or tearing away of a part or structure.

axillary: underarm; for example, axillary hair.

Bender Gestalt Test: the Bender Visual-Motor Gestalt Test, which consists of nine geometric designs to be copied.

biacromial: between the outer tip of one shoulder blade and the other.

bifid: divided by a cleft into two halves.

bi-iliac: between the outer edge of one hip bone and the other.

buccal smear: a smear of cells lightly scraped from inside the mouth and prepared on a microscopic slide, so as to disclose the presence or absense of a sex chromatin spot, in the nucleus of the cells; the spot is typically present (positive) in cells from females, but absent (negative) in cells from males.

carcinoma: cancer.

catheter: a tube for drawing fluids from a cavity as, for example, for draining urine from the bladder.

cautery: the application of heat or a caustic substance to clean and seal a wound and promote healing.

cholesterol: a fatlike, pearly substance found in all animal fats and oils and in various other tissues.

chromosome: one of 46 different-sized microscopic structures in the nucleus of each cell in the body on which are arranged, like beads on a string, the genes which carry an individual's heredity.

circumareolar: around the areola.

clitoris: the small, hooded organ at the top of the cleft of the female sex organs, which is the counterpart of the penis in the male.

clonic movements: in an epileptic seizure, muscular spasm in which rigidity and relaxation alternate in rapid succession.

coitus: sexual intercourse.

corona: the rim which surrounds the base of the glans of the penis where it joins the skin of the shaft.

corpora cavernosa: the pair of "cavernous" or spongy columns of erectile tissue in the penis below which is the urethra and corpus spongiosum.

corpus luteum: "yellow body;" a yellow mass in the ovary formed from the graafian follicle after the egg is released. It produces progesterone, the pregnancy hormone, and grows and lasts for several months if the egg is fertilized and pregnancy occurs.

corpus spongiosum: the erectile, spongy tissue of the penis surrounding the urethral tube.

corticosteroids: the steroid hormones of the adrenal cortex.

cortisol: the naturally secreted glucocorticoid hormone of the adrenal cortex in man.

couvade: a custom recorded among some ethnic groups whereby the husband ritually imitates aspects of his wife's pregnancy, labor and delivery.

cryptorchid: with one testis (unilateral) or both (bilateral) undescended.

cunnilingus: erotic stimulation of the female sex organs with the tongue and mouth, either in lesbian or normal heterosexual relations.

cutaneous: belonging to the skin.

cyproterone: a synthetic, hormonal steroid substance, related to progesterone, which is highly potent as an antiandrogen.

cystitis: inflammation of the bladder.

cytogenetics: that branch of the science of heredity that deals with the chromosomes and genes, carriers of the genetic code, within the cell nucleus.

dartos: the tunica dartos, a layer of tissue beneath the skin of the scrotum.

dehydroisoandrosterone: one of the variant forms of male sex hormone, measurable in the blood.

dienestrol: a synthetic estrogenic substance derived from diethylstilbestrol.

diethylstilbestrol: a synthetic compound having the biological properties but not the steroid structure of estrogen.

dildo: a prosthetic penis, or an artificial instrument resembling a penis for use in sexual intercourse.

distal: remote, furthest away.

dorsal: pertaining to the back.

Draw-a-Person Test: a projective test requiring the patient to draw a person; standardized scoring norms are available.

duodenal: in the duodenum, the part of the small intestine that leads away from the stomach itself.

dysplasia (*adjective*, dysplastic): faulty or incomplete development of an organ or tissue

ectopic: out of the normal place.

EEG (electroencephalogram): the ink tracing of wave patterns generated by electrical activity in the brain and recorded electromechanically.

ego syntonic: consistent with a person's self-image and ego ideal.

ejaculation: the emission of spermatic fluid from the penis; known in the vernacular as discharging or coming.

electroencephalogram: *see* **EEG.**

emetine: a drug derived from ipecac, a tropical American root, a powerful producer of nausea and vomiting.

endocrine: pertaining to the ductless or hormone-secreting glands.

endogenous: *see* **exogenous.**

endometrium: the mucous membrane that lines the cavity of the uterus.

enzyme: one of a class of organic compounds found in living organisms which speed up or catalyze many of the chemical processes that maintain life.

enzymatic: *see* **enzyme.**

eonist: a male with a compulsion to dress and be socially accepted as a woman; named for the Chevalier d'Eon, a famous transvestite impersonator and royal ambassador in the court of Louis XV of France.

epicanthal fold: on the side of the eyelids closest to the nose, the fold of skin that is universally characteristic of most Asiatic races; it is rarely seen in Caucasians.

epigastric: that region of the abdomen which lies over or in front of the stomach.

epilation: removal of hair by the roots.

epileptogenic focus: a scar or other damaged part of the brain which triggers epileptic seizures.

epinephrine: a chemical product of the medulla of the adrenal gland which can be synthesized commercially; it can be used locally to constrict blood vessels.

epiphyseal: pertaining to the epiphyses, the small bony centers where growth takes place at the ends of the long bones.

epithelium: the cellular covering that forms the skin externally or as the lining of a cavity.

equilibrium dialysis: a laboratory technique which can be applied to separate bound from unbound steroids.

eroticism: sexual arousal and response as experienced in personal awareness.

ester: in chemistry, a structural variant of a compound; it is formed by the combination of an acid and an alcohol.

estradiol: the most active of the naturally occurring estrogens, produced chiefly by the ovary; it is commercially prepared in various compounds such as estradiol benzoate and ethinyl estradiol.

estrogen: female sex hormone, produced in the ovary, and named because, in lower animals, it brings the female into estrus (heat); *see* **progesterone.**

eugenic: leading to or regulating genetic improvement of the race.

eunuchism: the state of being a eunuch or castrated male.

eunuchoid: like a eunuch, that is having the physique and other sexual characteristics of a male who has been castrated and not supplied with replacement sex hormone.

exhibitionism: behaviorally, it is the act of displaying oneself sexually, unexpectedly, to a stranger; psychically it is the condition of being dependent, for sexual arousal and orgasm, on first having exposed one's penis to a stranger, so as to have evoked a reaction of surprise and panic; it is a psychosexual disorder of males.

exogenous: coming from the outside, as when hormones are taken as pills or injections instead of being manufactured by the body itself; *antonym,* **endogenous.**

fascia: a covering of fibrous tissue below the skin.

fetishism: a psychosexual condition in which sexual arousal is dependent upon a special object or thing, such as a shoe, an article of clothing, or a lock of hair.

fistulae (*singular,* fistula): a passage or canal opened by infection between two organs or between an inner cavity and the outside skin.

forme fruste: an incomplete or defective form, version, or manifestation of something.

FSH: follicle-stimulating hormone; it is produced by the pituitary gland and stimulates the formation of the ovarian follicle on the ovary, and the production of estrogen; when the follicle ripens, luteinizing hormone takes over, and the progestinic phase of the menstrual cycle appears.

gas chromatography: a technique for separating, cleaning, and measuring various volatile compounds, including those produced by the human body; the results can be recorded automatically on paper by a moving pen, or in a computer.

gastrocnemius: the muscle in the calf of the leg.

gastrointestinal: pertaining to the stomach and intestine.

generalization gradient: a term in experimental learning to refer to the finding that when a conditioned response is formed to one stimulus, the size of responses to other stimuli varies with their similarity to the original one.

genotype: the features and characteristics of an individual as programmed by his genetic code; *see* **phenotype.**

geriatrics: the branch of medicine that specializes in aging and the aged.

gestagen: *see* **progestin.**

gonadal agenesis: failure of the gonads to form or develop, which is the pathognomonic sign of the syndrome of gonadal agenesis (Turner's syndrome) also sometimes referred to as gonadal dysgenesis.

gonadectomy: removal of the ovaries or testes; castration.

gonadotropin: one of the hormones released by the anterior lobe of the pituitary gland which programs the activity of the ovary in the female and the testis in the male.

gynecoid: resembling the female.

gynecology (*adjective,* **gynecologic**)**:** in medicine, the specialty of female functioning, especially in the reproductive and urinary organs; *see* **urology.**

gynecomastia: the development of breasts on a male, naturally or as a result of hormonal treatment.

habitus: body build and appearance as, for example, a masculine or feminine habitus.

hermaphroditism: a congenital condition of ambiguity of the reproductive structures so that the sex of the individual is not clearly defined as exclusively male or exclusively female; the condition is named for Hermes and Aphrodite, the Greek god and goddess of love.

hemostasis: stoppage of bleeding.

heterologous: the opposite of homologous; *see* **homologue.**

heterologous hormone therapy: treatment with hormones typical of the opposite sex as, for example, when androgen is given to a female or estrogen to a male.

hilus: a depression or pit at that part of an organ where the vessels and nerves enter.

hirsutism: hairiness.

homeostasis: stability or balance of internal conditions in an organism or of the relationship between two or more individuals.

homologue: an item or thing which has the same relative position, proportion, value or structure as its counterpart, for example, the clitoris and the penis; *see* **heterologous.**

hormonal castration: suppression of natural hormone production in the sex glands by administering another hormone, for example, by using estrogen to suppress androgen production in the male.

homosexuality: behaviorally, it is the act of sexual stimulation between any two people of the same sex; psychically, it is the condition of being romantically and sexually aroused by and attracted toward a member of one's own sex, consistently, in imagination or action.

hormone: one of a class of chemical substances, made by the body in its endocrine glands that, transported in the blood stream, carry instruction to various receptor cells regarding their growth and function.

hyperandrogenism: having too much androgen or male sex hormone.

hyperplasia: excessive formation of tissue with an increased number of cells; *see* **hypertrophy;** *antonym,* **hypoplasia.**

hypertrichosis: excessive hairiness of the body and face, especially in women.

hypertrophy: overdevelopment in size; *see* **hyperplasia;** *antonyms,* **hypotrophy, atrophy.**

hypogenitalism: abnormal smallness of the sex organs in the male.

hypogonadism: a condition or developmental defect in males in which the gonads or testes are too small and deficient in supplying the body with male sex hormone.

hypomanic: resembling the manic state, but lesser in degree.

hypophysis: the pituitary gland.

hypoplasia: smallness or defective development of an organ or tissue; *antonym,* **hyperplasia.**

hypothalamus: a structure of the diencephalon portion of the brain of special importance in regulating vital functions, including sex, by means of the release of neurohumoral substances from nerve cells; these substances in turn regulate the nearby pituitary gland.

hypotrophic: underdeveloped in size: *antonym,* **hypertrophic.**

hysterectomy: surgical removal of the uterus (womb).

hysteroid: having the quality of the hysteric symptom or the hysteric personality, but not the complete manifestation; hysteriform.

ICSH: interstitial cell stimulating hormone; *see* **luteinizing hormone.**

inferior labia: *see* **labia minora.**

ileum: the lower (distal) portion of the small intestine.

inframammary: situated below the mammary gland or breast.

inguinal: in the region of the groin.

in nucleo: at the beginning stage.

intercostal: situated between the ribs.

intercrural: between the legs or thighs, especially as pertaining to sexual intercourse; *synonym,* **interfemoral.**

intrapsychic: within the mind or personality.

intrapsychic dynamics: the interaction and balance, within the mind, of various coordinative and/or antagonistic programs of thought, feeling or action.

introitus: the entrance to a cavity, in particular the vagina.

involution: degeneration of tissues or organs; the reverse of evolution or development.

isotope: in chemistry and physics, alternative forms of an element that are the same except for a difference in atomic weight; some isotopes are radioactive.

jaundice: a sickness characterized by yellowness of the skin and eyes, due to the presence of bile pigments released from the liver.

karyotype: the visual display of a cell's chromosomes, photographed, measured, labeled, and arranged according to international convention.

kyphoscoliosis: curvature of the spine backwards and sideways.

labia majora: the larger or outer lips of the female sex organs.

labia minora: the smaller or inner lips of the female sex organs.

laparotomy: surgery in which the abdomen is opened as, for example, to explore the internal reproductive organs.

lesbianism: female homosexuality.

leucotomy: *see* **lobotomy.**

leydig cells: the interstitial cells of the testis, which are the male-hormone producing cells in contrast to those in the tubules which produce sperms.

LH: *see* **luteinizing hormone.**

libido: sexual drive or urge.

limbic: forming a border around.

limbic system: the old cortex or paleocortex, as contrasted with the neocortex of the brain; its functions pertain to those aspects of the human mind and behavior that are shared by lower species.

linea alba ("white line"): the midline of the abdomen.

lipid: an organic compound which is a fat or fatlike substance.

lithotomy position: the surgical position originally named for its use in cutting out bladder stones; the patient lies on the back, thighs spread, legs outstretched and feet lifted to be held in stirrups, so that the genitalia are easy of access.

lobotomy: a method in psychiatry of controlling severe symptoms in certain advanced forms of psychosis by surgically severing the frontal lobes from the rest of the brain.

luteal: pertaining to the corpus luteum, and thus to the stage in the menstrual cycle after ovulation, up to menstruation.

luteinizing hormone (LH): one of the gonadotropic hormones of the pituitary gland; it induces release of the egg from the graafian follicle and transformation of the latter into a corpus luteum; LH in the female is the same as ICSH (interstitial cell stimulating hormone) which stimulates testosterone production in the male.

masochist: a person whose ability to experience sexual arousal and orgasm is dependent upon or enhanced by subservience, humiliation, and the feeling of pain from physical injury inflicted by the partner.

mastectomy: removal of the breasts surgically.

medullary: the central portion, or medulla, of an organ, as contrasted with its cortex or outer part.

menarche: the establishment or beginning of menstrual function at puberty.

menopause: in a female, the change of life; cessation of menstrual functioning.

mesentery: the peritoneal fold attaching the intestine to the posterior abdominal wall.

metabolite: a chemical compound which appears in the body as a residual, after the body has made use of or otherwise changed the parent compound.

metaplastic: transformation of one tissue into another.

metastasis (*plural*, metastases): a new growth of cancer, seeded by cells that travel from an older growth.

metrazol: pentylenetetrazol, a drug stimulating to the brain and nervous system and useful in testing for epileptic tendencies in the brain.

micturition: urination.

mongolism: a type of congenital mental deficiency named because of the appearance of the eyes, but now better known as Down's syndrome; it is caused by an extra chromosome at the number 21 position.

MMPI: Minnesota Multiphasic Personality Inventory, a questionnaire type of test of 500 items.

mullerian ducts: the structures in the fetus that will, in the female, develop into the uterus and fallopian tubes; *see* **wolffian ducts.**

myopic: near-sighted.

narcissism: self-love.

narcolepsy: an abnormal condition marked by sudden attacks of sleep; also sometimes called sleep epilepsy.

necrosis: the death or decay of tissue in part of the living body.

neuroendocrine: pertaining to the interaction of function between nerve cells of the central nervous system and hormone secreting cells of the endocrine glands.

neuropsychologic: that aspect of mental performance that signifies healthy or impaired functioning of nerve cells in the brain.

neurosecretory material: a complex of chemical substances found in hypothalamic nerve cells; when released it regulates the release of hormones from cells in the nearby pituitary gland; *see* **"releasing factors."**

neurosis (psychoneurosis; adjective, **psychoneurotic):** an emotional disorder in which feelings of anxiety, obsessional thoughts, compulsive acts, and physical complaints without objective evidence of disease, in various patterns, dominate the personality. Appreciation of reality is essentially retained; there are no delusions or hallucinations. Less malignant than psychosis.

nondysjunction: an error in the genetic mechanism of chromosome separation, resulting in a cell which has too many or too few chromosomes and which transmits the error to all cells descended from it.

nystagmus: involuntary rapid and flickering movement of the eyeball.

oedipal: pertaining to the theory of the oedipus complex in Freudian doctrine, which teaches that a young son experiences a rivalrous competition with his father for the mother's attentiveness, and vice versa for a daughter.

oophorectomy: surgical removal of the ovary or ovaries; castration of the female.

orchidectomy: removal of the testicles; castration of the male.

osteoporosis: abnormal porousness of bone by the enlargement of its canals or the formation of abnormal spaces.

ovariectomy: surgical removal of the ovary; castration of the female.

ovotestis: an abnormally developed sex gland of which the cell structure partially resembles an ovary and partially a testis.

panhysterectomy: surgical removal of the uterus and cervix.

papilla (*plural*, papillae): a small, nipple-shaped elevation.

paranoia (*adjective*, paranoic): a major mental disorder characterized by suspiciousness, systematized delusions (especially delusional systems of persecution and grandeur) and, perhaps, hallucinations.

paranoid: similar to paranoia; delusions are less systematized, thinking may be more organized.

paraphilia: a psychosexual condition of being obsessively aroused by and committed to an unusual or unacceptable stimulus.

parotid: situated near the ear, a salivary gland.

pathognomonic: pertaining to a sign or symptom by which a diagnosis can be made.

pathological: characterized by defect, disease or disorder of function.

pedicle flap: in skin grafting, a flap of skin which is left temporarily attached at one edge (the pedicle) to its site of origin so that its blood supply is preserved while it heals in the new position.

penectomy: surgical removal of the penis; synonym, peotomy, penidectomy.

perineal: in the anatomical region between the thighs; in the male it is between the scrotum and the anus, in the female, between the mons veneris and the anus.

periosteal: pertaining to the periosteum, the tough fibrous membrane surrounding the bone.

phalloid: like a phallus or penis.

phallus: a penis or a deformed and enlarged clitoris that resembles a penis.

phenotype: the manifest product in which the genetic code reveals itself, whereby individuals of differing heredity share common features and characteristics, for example, the sexual features of femininity in the female phenotype; *see* **genotype.**

phylogenetic: belonging to the phylus or species; for example, a developmental trait or characteristic.

pinnaplasty: plastic surgery of the ears.

plasma: the clear-fluid portion of the blood in which the red and white corpuscles are suspended.

posterior fornix: the vault of vagina at its posterior wall.

postictal: the period after a seizure.

pregnanediol: a hormonally inactive waste product mainly of progesterone, secreted and measured in the urine.

pregnanetriol: a hormonally inactive waste product of, indirectly, progesterone, secreted and measured in the urine.

premarin: a commercially marketed, natural estrogen, obtained from pregnant mare's serum.

progesterone: pregnancy hormone, one of the two sex hormones chiefly characteristic of the female; it is produced by the ovary in the corpus luteum, following ovulation; *see* **estrogen.**

progestin: any one of the class of synthetic sex-hormonal steroids that has a physiologic action resembling progesterone; also known as gestagen.

proprioceptive: pertaining to a sensory perception from a source within the body, not from an external stimulus.

prostatic: pertaining to the prostate gland, where the seminal fluid is chiefly made, in the male.

prosthesis: an artificial limb or organ of the body.

pseudohermaphrodite: a male hermaphrodite (with two testes) or a female hermaphrodite (with two ovaries) as contrasted with a true hermaphrodite (with both testicular and ovarian tissue).

pseudoneurotic schizophrenia: a type of schizophrenia complicated by the presence of obsessive, hysteric, phobic or other apparently neurotic symptoms.

psychophysiologic: characterized by psychic and physiologic function simultaneously, each contingent upon the other.

psychosis (*adjective*, **psychotic**): major, severe form of mental disease in which appreciation of reality is lost; there may be delusions of grandeur and persecution as well as hallucinations. More malignant than neurosis.

ptotic (*noun*, **ptosis**): drooping.

quasipsychotic: as though psychotic; *see* **psychosis.**

rectovaginal fistula: a fistula joining the rectum and vagina; *see* **fistula.**

"releasing factors": polypeptides found in hypothalamic nerve centers which stimulate the release of gonadotropins from the pituitary gland; *see* **neurosecretory material.**

rhinoplasty: plastic surgery of the nose to alter its appearance.

Rorschach test: a projective psychologic test consisting of ten prepared ink-blots into which the subject reads shapes and meanings.

sadist: a person whose ability to experience sexual arousal and orgasm is dependent upon or enhanced by dominating and inflicting pain on the partner.

sadomasochism: sadism and masochism together, in either one person or a pair.

salpinges (*singular*, **salpinx**): the oviducts or fallopian tubes.

salpingo-oophorectomy: removal of ovary and oviduct (fallopian tube).

sartorial sex: the sex one is dressed as.

schizophrenia (*adjective*, **schizophrenic**): one of the major mental illnesses; thought disorder and social withdrawal are primary symptoms.

sebum: a fatty secretion from the sebacious glands of the skin.

17α-ethinylestradiol: a commercially prepared, very effective form of estrogen to be taken by mouth.

17-hydroxycorticosteroids: the waste products mainly of cortisol secreted and measured in the urine.

17-ketosteroids: the waste products of male sex hormones secreted and measured in the urine; they are steroids with an oxygen atom at carbon atom number 17, and they are related to the amount of male sex hormone made in the body.

17α-methyltestosterone: a commercially prepared form of androgen to be taken by mouth.

sex chromatin: the sex-indicator spot normally in the nucleus of cells taken from the blood, skin or other tissues of females, but not males; *see* **buccal smear.**

silastic: a commercially prepared plastic material tolerated by the body's fluids and tissues when transplanted into them.

sociopathic: manifesting behavior that is strongly against the best interests of one's fellow men, as in crime and delinquency; the term is sometimes used synonymously with psychopathic.

spermatogenesis: the making of sperms in the tubules of the testicles.

sphenoidal: pertaining to the sphenoid bone, an irregularly wedge-shaped bone at the base of the skull.

stenosis: narrowing or stricture of a duct or canal.

stent: a device worn postsurgically to keep open the cavity of a constructed vagina; also called a form or mold.

sternal: in the region of the breast bone.

steroids: organic chemical compounds, including the sex hormones and those secreted by the adrenal cortex.

subincision: a sexual initiation rite performed by some aboriginal groups in Australia, whereby the urethral tube of the penis is split open along its full length and not allowed to close in healing; consequently, semen and urine both escape from an orifice at the junction of the penis and scrotum, and it is necessary to sit to urinate.

superior labia: the labia majora.

suprapubic trochar cystostomy tube: a urinary drainage tube placed into an open cut into the bladder above the pubic arch by means of a surgical stiletto.

suprasternal: situated above the sternum.

syndactyly: the condition in which two fingers or toes are more or less joined together, as by a web of skin.

TAT (thematic apperception test): a projective psychologic test consisting of pictures of potentially dramatic content, for which the subject supplies his own narrative.

temporal lobe: that part of the cerebral cortex on each side of the brain that is located interiorly from the temple.

testosterone: male sex hormone (testis hormone).

theca cells: the estrogen-producing cells that cover a graafian follicle on the ovary.

tibia (*adjective,* tibial): the inner and larger bone of the leg below the knee.

tort: a wrongful act against which a civil action may be taken.

transperineal urethrostomy: the surgical making of a urinary orifice through the perineum, that is, in a feminine position to permit urination by sitting only.

transsexualism: behaviorally, it is the act of living and passing in the role of the opposite sex, before or after having attained a hormonal, surgical, and legal sex reassignment; psychically, it is the condition of people who have a conviction that they belong to the opposite sex and are driven by a compulsion to have the body, appearance, and social status of the opposite sex.

transvestism: behaviorally, it is the act of dressing in the clothes of the opposite sex; psychically, it is the condition of feeling compelled to cross-dress, often in relation to sexual arousal and attainment of orgasm.

tunica vaginalis testis: a membranous inner covering of the testis.

umbilicus: the navel.

urogenital sinus: the common external opening of the urethra and the vagina or vaginal pouch, found in cases of ambiguous, hermaphroditic external genitalia.

urology (*adjective,* **urologic**)**:** the branch of medicine that has to do with urine and the urinary tract and, especially in males, the reproductive organs; *see* **gynecology.**

utriculus: the utriculus masculinus, a minute blind pouch in the region of the prostate gland, the remnant of the mullerian duct in the male, corresponding to the uterus in the female.

vaginoplasty: plastic surgical construction or reconstruction of the vagina.

vasectomy: a method of birth control by surgically severing the vas deferens, the duct along which sperms pass from the testicle to the penis.

vesicle: a small sac; a blister or pimple.

vulva: the external part of the female sex organs.

WAIS: Wechsler Adult Intelligence Scale.

wolffian ducts: the embryonic structures which develop into the internal reproductive anatomy of the male, attached to the testicles; *see* **mullerian ducts.**

Zimmerman reaction: a chemical test for 17-ketosteroids.

zygomatic: in the region of the cheek bone.

zygote: the growing cell which results when a single egg cell from the female is fertilized by a single sperm cell from the male.

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